

Certificate of Compliance

Certificate Number:

UL-US-L169586-31-
03015991-1

Report Reference:

E169586-19951030

Issue Date:

2024-03-29

Issued to:

COSMO ELECTRONICS CORP
11F No 258 Lian-Cheng Rd
Chung-Ho District New Taipei 235
Taiwan

This certificate confirms that representative samples of:

FPQU2 - Optical Isolators - Component

See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

UL 1577, Edition 5, Issue Date 2014-04-25, Revision Date 2023-07-06

Additional Information:

See UL Product iQ® at <https://iq.ulprospector.com> for additional information.

This Certificate of Compliance indicates that representative samples of the product described in the certification report have met the requirements for UL certification. It does not provide authorization to apply the UL Recognized Component Mark. Only the Authorization Page that references the Follow-Up Services Procedure for ongoing surveillance provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.



David Piecuch
UL Mark Certification Program Manager



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CERTIFICATE OF COMPLIANCE

Certificate number UL-US-L169586-31-03015991-1
Report reference E169586-19951030
Date 2024-03-29

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Model	Product Description
1010X, Where X is an optional suffix, with or without Prefix KP.	Double protection optical isolators at 5000 Vac isolation voltage
1010X-1*	Optical isolators, double protection type, rated 5000 Vac
2010X*	Optical isolators, double protection type, rated 5000 Vac
2010X-1*	Optical isolators, double protection type, rated 5000 Vac
2110X*	Optical isolators, double protection type, rated 5000 Vac
2110X-1*	Optical isolators, double protection type, rated 5000 Vac
3010X*	Optical isolators, double protection type, rated 5300 Vac
3010X-1#	Optical isolators, double protection type, rated 5300 Vac
3011X*	Optical isolators, double protection type, rated 5300 Vac
3011X-1#	Optical isolators, double protection type, rated 5300 Vac
3012X*	Optical isolators, double protection type, rated 5300 Vac
3012X-1#	Optical isolators, double protection type, rated 5300 Vac
3020X*	Optical isolators, double protection type, rated 5300 Vac
3020X-1#	Optical isolators, double protection type, rated 5300 Vac
3021X*	Optical isolators, double protection type, rated 5300 Vac
3021X-1#	Optical isolators, double protection type, rated 5300 Vac
3022X*	Optical isolators, double protection type, rated 5300 Vac
3022X-1#	Optical isolators, double protection type, rated 5300 Vac



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3023X*	Optical isolators, double protection type, rated 5300 Vac
3023X-1#	Optical isolators, double protection type, rated 5300 Vac
3031X*	Optical isolators, double protection type, rated 5300 Vac
3031X-1#	Optical isolators, double protection type, rated 5300 Vac
3032X*	Optical isolators, double protection type, rated 5300 Vac
3032X-1#	Optical isolators, double protection type, rated 5300 Vac
3033X*	Optical isolators, double protection type, rated 5300 Vac
3033X-1#	Optical isolators, double protection type, rated 5300 Vac
3041X*	Optical isolators, double protection type, rated 5300 Vac
3041X-1#	Optical isolators, double protection type, rated 5300 Vac
3042X*	Optical isolators, double protection type, rated 5300 Vac
3042X-1#	Optical isolators, double protection type, rated 5300 Vac
3043X*	Optical isolators, double protection type, rated 5300 Vac
3043X-1#	Optical isolators, double protection type, rated 5300 Vac
3061X*	Optical isolators, double protection type, rated 5300 Vac
3061X-1#	Optical isolators, double protection type, rated 5300 Vac
3062X*	Optical isolators, double protection type, rated 5300 Vac
3062X-1#	Optical isolators, double protection type, rated 5300 Vac
3063X*	Optical isolators, double protection type, rated 5300 Vac
3063X-1#	Optical isolators, double protection type, rated 5300 Vac
3081X*	Optical isolators, double protection type, rated 5300 Vac



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Date 2024-03-29

3081X-1#	Optical isolators, double protection type, rated 5300 Vac
3082X*	Optical isolators, double protection type, rated 5300 Vac
3082X-1#	Optical isolators, double protection type, rated 5300 Vac
3083X*	Optical isolators, double protection type, rated 5300 Vac
3083X-1#	Optical isolators, double protection type, rated 5300 Vac
3162X*	Optical isolators, double protection type, rated 5300 Vac
3162X-1#	Optical isolators, double protection type, rated 5300 Vac
3163X*	Optical isolators, double protection type, rated 5300 Vac
3163X-1#	Optical isolators, double protection type, rated 5300 Vac
4N35X*	Optical isolators, double protection type, rated 5300 Vac
K1010X, Where X is an optional suffix.	Double protection optical isolators at 5000 Vac isolation voltage
K1010X-1*	Optical isolators, double protection type, rated 5000 Vac
K2010X*	Optical isolators, double protection type, rated 5000 Vac
K2010X-1*	Optical isolators, double protection type, rated 5000 Vac
K2110X*	Optical isolators, double protection type, rated 5000 Vac
K2110X-1*	Optical isolators, double protection type, rated 5000 Vac
KAC1010	Double protection optical isolators at 5000 Vac isolation
KH11D1X*	Optical isolators, double protection type, rated 5000 Vac
KH11D1X-1*	Optical isolators, double protection type, rated 5000 Vac
KKH11D1X*	Optical isolators, double protection type, rated 5000 Vac
KKH11D1X-1*	Optical isolators, double protection type, rated 5000 Vac



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Date 2024-03-29

KMOC3010X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3010X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3011X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3011X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3012X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3012X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3020X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3020X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3021X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3021X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3022X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3022X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3023X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3023X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3031X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3031X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3032X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3032X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3033X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3033X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3041X*	Optical isolators, double protection type, rated 5300 Vac



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KMOC3041X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3042X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3042X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3043X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3043X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3061X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3061X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3062X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3062X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3063X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3063X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3081X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3081X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3082X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3082X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3083X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3083X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3162X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3162X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3163X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3163X-1#	Optical isolators, double protection type, rated 5300 Vac



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Date 2024-03-29

KP1010X*	Optical isolators, double protection type, rated 5000 Vac
KP1010X-1*	Optical isolators, double protection type, rated 5000 Vac
KP2010X*	Optical isolators, double protection type, rated 5000 Vac
KP2010X-1*	Optical isolators, double protection type, rated 5000 Vac
KP2110X*	Optical isolators, double protection type, rated 5000 Vac
KP2110X-1*	Optical isolators, double protection type, rated 5000 Vac
KPC4N35X*	Optical isolators, double protection type, rated 5300 Vac



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Certificate of Compliance

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UL-CA-L169586-41-
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Report Reference:

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COSMO ELECTRONICS CORP
11F No 258 Lian-Cheng Rd
Chung-Ho District New Taipei 235
Taiwan

This certificate confirms that representative samples of:

FPQU8 - Optical Isolators Certified for Canada - Component

See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

CSA Component Acceptance Service Notice No. 5A, Issue Date:
1998-01-23

Additional Information:

See UL Product iQ® at <https://iq.ulprospector.com> for additional information.

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Model	Product Description
1010X, Where X is an optional suffix, with or without Prefix KP.	Double protection optical isolators at 5000 Vac isolation voltage
1010X-1*	Optical isolators, double protection type, rated 5000 Vac
2010X*	Optical isolators, double protection type, rated 5000 Vac
2010X-1*	Optical isolators, double protection type, rated 5000 Vac
2110X*	Optical isolators, double protection type, rated 5000 Vac
2110X-1*	Optical isolators, double protection type, rated 5000 Vac
3010X*	Optical isolators, double protection type, rated 5300 Vac
3010X-1#	Optical isolators, double protection type, rated 5300 Vac
3011X*	Optical isolators, double protection type, rated 5300 Vac
3011X-1#	Optical isolators, double protection type, rated 5300 Vac
3012X*	Optical isolators, double protection type, rated 5300 Vac
3012X-1#	Optical isolators, double protection type, rated 5300 Vac
3020X*	Optical isolators, double protection type, rated 5300 Vac
3020X-1#	Optical isolators, double protection type, rated 5300 Vac
3021X*	Optical isolators, double protection type, rated 5300 Vac
3021X-1#	Optical isolators, double protection type, rated 5300 Vac
3022X*	Optical isolators, double protection type, rated 5300 Vac
3022X-1#	Optical isolators, double protection type, rated 5300 Vac



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3031X*	Optical isolators, double protection type, rated 5300 Vac
3031X-1#	Optical isolators, double protection type, rated 5300 Vac
3032X*	Optical isolators, double protection type, rated 5300 Vac
3032X-1#	Optical isolators, double protection type, rated 5300 Vac
3033X*	Optical isolators, double protection type, rated 5300 Vac
3033X-1#	Optical isolators, double protection type, rated 5300 Vac
3041X*	Optical isolators, double protection type, rated 5300 Vac
3041X-1#	Optical isolators, double protection type, rated 5300 Vac
3042X*	Optical isolators, double protection type, rated 5300 Vac
3042X-1#	Optical isolators, double protection type, rated 5300 Vac
3043X*	Optical isolators, double protection type, rated 5300 Vac
3043X-1#	Optical isolators, double protection type, rated 5300 Vac
3061X*	Optical isolators, double protection type, rated 5300 Vac
3061X-1#	Optical isolators, double protection type, rated 5300 Vac
3062X*	Optical isolators, double protection type, rated 5300 Vac
3062X-1#	Optical isolators, double protection type, rated 5300 Vac
3063X*	Optical isolators, double protection type, rated 5300 Vac
3063X-1#	Optical isolators, double protection type, rated 5300 Vac
3081X*	Optical isolators, double protection type, rated 5300 Vac



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UL Mark Certification Program Manager

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3081X-1#	Optical isolators, double protection type, rated 5300 Vac
3082X*	Optical isolators, double protection type, rated 5300 Vac
3082X-1#	Optical isolators, double protection type, rated 5300 Vac
3083X*	Optical isolators, double protection type, rated 5300 Vac
3083X-1#	Optical isolators, double protection type, rated 5300 Vac
3162X*	Optical isolators, double protection type, rated 5300 Vac
3162X-1#	Optical isolators, double protection type, rated 5300 Vac
3163X*	Optical isolators, double protection type, rated 5300 Vac
3163X-1#	Optical isolators, double protection type, rated 5300 Vac
4N35X*	Optical isolators, double protection type, rated 5300 Vac
K1010X, Where X is an optional suffix.	Double protection optical isolators at 5000 Vac isolation voltage
K1010X-1*	Optical isolators, double protection type, rated 5000 Vac
K2010X*	Optical isolators, double protection type, rated 5000 Vac
K2010X-1*	Optical isolators, double protection type, rated 5000 Vac
K2110X*	Optical isolators, double protection type, rated 5000 Vac
K2110X-1*	Optical isolators, double protection type, rated 5000 Vac
KAC1010	Double protection optical isolators at 5000 Vac isolation
KH11D1X*	Optical isolators, double protection type, rated 5000 Vac
KH11D1X-1*	Optical isolators, double protection type, rated 5000 Vac
KKH11D1X*	Optical isolators, double protection type, rated 5000 Vac
KKH11D1X-1*	Optical isolators, double protection type, rated 5000 Vac



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KMOC3010X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3010X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3011X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3011X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3012X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3012X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3020X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3020X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3021X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3021X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3022X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3022X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3023X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3023X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3031X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3031X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3032X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3032X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3033X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3033X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3041X*	Optical isolators, double protection type, rated 5300 Vac



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KMOC3041X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3042X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3042X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3043X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3043X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3061X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3061X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3062X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3062X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3063X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3063X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3081X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3081X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3082X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3082X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3083X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3083X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3162X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3162X-1#	Optical isolators, double protection type, rated 5300 Vac
KMOC3163X*	Optical isolators, double protection type, rated 5300 Vac
KMOC3163X-1#	Optical isolators, double protection type, rated 5300 Vac



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KP1010X*	Optical isolators, double protection type, rated 5000 Vac
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KP2010X*	Optical isolators, double protection type, rated 5000 Vac
KP2010X-1*	Optical isolators, double protection type, rated 5000 Vac
KP2110X*	Optical isolators, double protection type, rated 5000 Vac
KP2110X-1*	Optical isolators, double protection type, rated 5000 Vac
KPC4N35X*	Optical isolators, double protection type, rated 5300 Vac



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Certificate of Compliance

Certificate Number(s):

UL-US-L169586-31-
22807991-3

Report Reference:

E169586-19970822

Issue Date:

2026-03-27

Issued to:

COSMO ELECTRONICS CORP

**11F No 258 Lian-Cheng Rd, Chung-Ho District, New Taipei, 235,
TW**

This certificate confirms that representative samples of:

FPQU2 - Optical Isolators - Component

See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

UL 1577, Fourth Edition, last revised May 4, 2012

Additional Information:

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Look for the UL Recognized Component Mark on the product.



A handwritten signature in black ink, appearing to read 'David Piecuch'.

David Piecuch

UL Mark Certification Program Manager

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CERTIFICATE OF COMPLIANCE

Certificate number(s): UL-US-L169586-31-22807991-3
Report reference: E169586-19970822
Issue Date: 2026-03-27

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Optical isolators, double protection type, providing 3750 V ac isolation

Model(s): KPS2802, KPS2801, KPS2805, KPS2806, KPS2832

Optical isolators, double protection type, providing 5000 V ac isolation

Model(s): KPC8Q52X#, KPC814X#, 4N33X#, 847X#, 3010X#, KPC827X#, 8Q52X#, 817X#, KPC932X#, 733X#, KPC847X#, KPC6N135X, KPC4N33X#, KPC845X, KPC8D52X#, 933X#, 844X#, KPC6N139X, KPC725VX#, KPC817X#, 852X#, K3010X#, KPC6N138X, KPC825X, KPC853X#, 827X#, 824X#, 725VX#, KPC844X#, KPC933X#, KP3010X#, 853X#, KPC733X#, 814X#, KPC824X#, 8D52X#, KPC815X, KPC852X#, 932X#, KPC6N136X

Optical isolators, double protection type, rated 5000 Vac

Model(s): KP4010X#, 5010X#, 1020X#, KP6010X#, KP1020X#, 3040X#, KP7110X#, KP3040X#, 4040X#, KP4020X#, 6010X#, 1040X#, KP3020X#, 4020X#, KP1040X#, KP7010X#, 1110X#, 7010X#, KP4040X#, KP5010X#, 7110X#, 3020X#, 4010X#, KP1110X#

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Report Reference:

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COSMO ELECTRONICS CORP

11F No 258 Lian-Cheng Rd, Chung-Ho District, New Taipei, 235, TW

This certificate confirms that representative samples of:

FPQU8 - Optical Isolators Certified for Canada - Component

See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

CSA Component Acceptance Service No. 5, revised 1998-01-23

Additional Information:

See UL Product iQ® at <https://iq.ulprospector.com> for additional information.

This Certificate of Compliance indicates that representative samples of the product described in the certification report have met the requirements for UL certification. It does not provide authorization to apply the UL Recognized Component Mark. Only the Authorization Page that references the Follow-Up Services Procedure for ongoing surveillance provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.



David Piecuch

UL Mark Certification Program Manager



Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact UL Solutions Customer Service at <https://www.ul.com/contact-us>.

CERTIFICATE OF COMPLIANCE

Certificate number(s): UL-CA-L169586-41-22807991-3
Report reference: E169586-19970822
Issue Date: 2026-03-27

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Optical isolators, double protection type, providing 3750 V ac isolation

Model(s): KPS2802, KPS2801, KPS2805, KPS2806, KPS2832

Optical isolators, double protection type, providing 5000 V ac isolation

Model(s): KPC8Q52X#, KPC814X#, 4N33X#, 847X#, 3010X#, KPC827X#, 8Q52X#, 817X#, KPC932X#, 733X#, KPC847X#, KPC6N135X, KPC4N33X#, KPC845X, KPC8D52X#, 933X#, 844X#, KPC6N139X, KPC725VX#, KPC817X#, 852X#, K3010X#, KPC6N138X, KPC825X, KPC853X#, 827X#, 824X#, 725VX#, KPC844X#, KPC933X#, KP3010X#, 853X#, KPC733X#, 814X#, KPC824X#, 8D52X#, KPC815X, KPC852X#, 932X#, KPC6N136X

Optical isolators, double protection type, rated 5000 Vac

Model(s): KP4010X#, 5010X#, 1020X#, KP6010X#, KP1020X#, 3040X#, KP7110X#, KP3040X#, 4040X#, KP4020X#, 6010X#, 1040X#, KP3020X#, 4020X#, KP1040X#, KP7010X#, 1110X#, 7010X#, KP4040X#, KP5010X#, 7110X#, 3020X#, 4010X#, KP1110X#

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact UL Solutions Customer Service at <https://www.ul.com/contact-us>.



Certificate of Compliance

Certificate Number:

UL-US-L169586-31-
60809991-1

Report Reference:

E169586-19990806

Issue Date:

2024-09-26

Issued to:

COSMO ELECTRONICS CORP
11F No 258 Lian-Cheng Rd
Chung-Ho District New Taipei 235
Taiwan

This certificate confirms that representative samples of:

FPQU2 - Optical Isolators - Component

See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

UL 1577, Edition 5, Issue Date 2014-04-25, Revision Date 2023-07-06

Additional Information:

See UL Product iQ® at <https://iq.ulprospector.com> for additional information.

This Certificate of Compliance indicates that representative samples of the product described in the certification report have met the requirements for UL certification. It does not provide authorization to apply the UL Recognized Component Mark. Only the Authorization Page that references the Follow-Up Services Procedure for ongoing surveillance provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.



A handwritten signature in black ink, appearing to read 'David Piecuch'.

David Piecuch
UL Mark Certification Program Owner

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact UL Solutions Customer Service at <https://www.ul.com/contact-us>.

CERTIFICATE OF COMPLIANCE

Certificate number UL-US-L169586-31-60809991-1
Report reference E169586-19990806
Date 2024-09-26



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CERTIFICATE OF COMPLIANCE

Certificate number UL-US-L169586-31-60809991-1
Report reference E169586-19990806
Date 2024-09-26

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Model	Product Description
353T	Optical isolators, double protection type, providing 3750 V ac isolation
354NT	Optical isolators, double protection type, providing 3750 V ac isolation
355NT	Optical isolators, double protection type, providing 3750 V ac isolation
357NT	Optical isolators, double protection type, providing 3750 V ac isolation
452	Optical isolators, double protection type, providing 3750 V ac isolation
KAC357NT	Double protection optical isolators at 37500 Vac isolation voltage
KPC353T	Optical isolators, double protection type, providing 3750 V ac isolation
KPC354NT	Optical isolators, double protection type, providing 3750 V ac isolation
KPC355NT	Optical isolators, double protection type, providing 3750 V ac isolation
KPC357NT	Optical isolators, double protection type, providing 3750 V ac isolation
KPC452	Optical isolators, double protection type, providing 3750 V ac isolation



Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact UL Solutions Customer Service at <https://www.ul.com/contact-us>.

Certificate of Compliance

Certificate Number:

UL-CA-L169586-41-
60809991-1

Report Reference:

E169586-19990806

Issue Date:

2024-09-26

Issued to:

COSMO ELECTRONICS CORP
11F No 258 Lian-Cheng Rd
Chung-Ho District New Taipei 235
Taiwan

This certificate confirms that representative samples of:

FPQU8 - Optical Isolators Certified for Canada - Component

See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

CSA Component Acceptance Service Notice No. 5A, Issue Date:
1998-01-23

Additional Information:

See UL Product iQ® at <https://iq.ulprospector.com> for additional information.

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Look for the UL Recognized Component Mark on the product.



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David Piecuch
UL Mark Certification Program Owner

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CERTIFICATE OF COMPLIANCE

Certificate number UL-CA-L169586-41-60809991-1
Report reference E169586-19990806
Date 2024-09-26

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Model	Product Description
353T	Optical isolators, double protection type, providing 3750 V ac isolation
354NT	Optical isolators, double protection type, providing 3750 V ac isolation
355NT	Optical isolators, double protection type, providing 3750 V ac isolation
357NT	Optical isolators, double protection type, providing 3750 V ac isolation
452	Optical isolators, double protection type, providing 3750 V ac isolation
KAC357NT	Double protection optical isolators at 37500 Vac isolation voltage
KPC353T	Optical isolators, double protection type, providing 3750 V ac isolation
KPC354NT	Optical isolators, double protection type, providing 3750 V ac isolation
KPC355NT	Optical isolators, double protection type, providing 3750 V ac isolation
KPC357NT	Optical isolators, double protection type, providing 3750 V ac isolation
KPC452	Optical isolators, double protection type, providing 3750 V ac isolation



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Certificate of Compliance

Certificate Number(s):

UL-US-L169586-31-
82803002-3

Report Reference:

E169586-20030828

Issue Date:

2026-03-31

Issued to:

COSMO ELECTRONICS CORP

**11F No 258 Lian-Cheng Rd, Chung-Ho District, New Taipei, 235,
TW**

This certificate confirms that representative samples of:

FPQU2 - Optical Isolators - Component

See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

UL 1577, Edition 5, Issue Date 2014-04-25, Revision Date 2023-07-06

Additional Information:

See UL Product iQ® at <https://iq.ulprospector.com> for additional information.

This Certificate of Compliance indicates that representative samples of the product described in the certification report have met the requirements for UL certification. It does not provide authorization to apply the UL Recognized Component Mark. Only the Authorization Page that references the Follow-Up Services Procedure for ongoing surveillance provides authorization to apply the UL Mark.

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Look for the UL Recognized Component Mark on the product.



David Piecuch

UL Mark Certification Program Manager



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CERTIFICATE OF COMPLIANCE

Certificate number(s): UL-US-L169586-31-82803002-3
Report reference: E169586-20030828
Issue Date: 2026-03-31

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Optical isolators, double protection type, providing 3750 V ac isolation

Model(s): 161J, 260J, KTLP260J, KTLP160J, 160G, 161G, KTLP165J, 165J, KTLP161J, KTLP160G, 166J, KTLP166J, KTLP168J, 168J, 160J, KTLP161G



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Certificate of Compliance

Certificate Number(s):

UL-CA-L169586-41-
82803002-3

Report Reference:

E169586-20030828

Issue Date:

2026-03-31

Issued to:

COSMO ELECTRONICS CORP

11F No 258 Lian-Cheng Rd, Chung-Ho District, New Taipei, 235, TW

This certificate confirms that representative samples of:

FPQU8 - Optical Isolators Certified for Canada - Component

See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

CSA Component Acceptance Service Notice No. 5A, Issue Date: 1998-01-23

Additional Information:

See UL Product iQ® at <https://iq.ulprospector.com> for additional information.

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Look for the UL Recognized Component Mark on the product.



David Piecuch

UL Mark Certification Program Manager



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CERTIFICATE OF COMPLIANCE

Certificate number(s): UL-CA-L169586-41-82803002-3
Report reference: E169586-20030828
Issue Date: 2026-03-31

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Optical isolators, double protection type, providing 3750 V ac isolation

Model(s): 161J, 260J, KTLP260J, KTLP160J, 160G, 161G, KTLP165J, 165J, KTLP161J, KTLP160G, 166J, KTLP166J, KTLP168J, 168J, 160J, KTLP161G

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact UL Solutions Customer Service at <https://www.ul.com/contact-us>.



Certificate of Compliance

Certificate Number(s):

UL-US-L169586-31-
72013002-3

Report Reference:

E169586-20031027

Issue Date:

2026-03-31

Issued to:

COSMO ELECTRONICS CORP
11F No 258 Lian-Cheng Rd, Chung-Ho District, New Taipei, 235,
TW

This certificate confirms that representative samples of:

FPQU2 - Optical Isolators - Component

See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

UL 1577, Edition 5, Issue Date 2014-04-25, Revision Date 2023-07-06

Additional Information:

See UL Product iQ® at <https://iq.ulprospector.com> for additional information.

This Certificate of Compliance indicates that representative samples of the product described in the certification report have met the requirements for UL certification. It does not provide authorization to apply the UL Recognized Component Mark. Only the Authorization Page that references the Follow-Up Services Procedure for ongoing surveillance provides authorization to apply the UL Mark.

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Look for the UL Recognized Component Mark on the product.



A handwritten signature in black ink, appearing to read 'David Piecuch'.

David Piecuch
UL Mark Certification Program Manager

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CERTIFICATE OF COMPLIANCE

Certificate number(s): UL-US-L169586-31-72013002-3
Report reference: E169586-20031027
Issue Date: 2026-03-31

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Optical isolators, double protection type, providing 5300 V ac isolation

Model(s): KMOC3052X#, 3051X#, KMOC3051X#, KMOC3053X#, 3053X#, 3052X#



Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact UL Solutions Customer Service at <https://www.ul.com/contact-us>.

Certificate of Compliance

Certificate Number(s):

UL-CA-L169586-41-
72013002-3

Report Reference:

E169586-20031027

Issue Date:

2026-03-31

Issued to:

COSMO ELECTRONICS CORP

11F No 258 Lian-Cheng Rd, Chung-Ho District, New Taipei, 235, TW

This certificate confirms that representative samples of:

FPQU8 - Optical Isolators Certified for Canada - Component

See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

CSA Component Acceptance Service Notice No. 5A, Issue Date: 1998-01-23

Additional Information:

See UL Product iQ® at <https://iq.ulprospector.com> for additional information.

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David Piecuch

UL Mark Certification Program Manager



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CERTIFICATE OF COMPLIANCE

Certificate number(s): UL-CA-L169586-41-72013002-3
Report reference: E169586-20031027
Issue Date: 2026-03-31

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Optical isolators, double protection type, providing 5300 V ac isolation

Model(s): KMOC3052X#, 3051X#, KMOC3051X#, KMOC3053X#, 3053X#, 3052X#



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Certificate of Compliance

Certificate Number:

UL-US-L169586-31-
52507002-2

Report Reference:

E169586-20070525

Issue Date:

2025-01-15

Issued to:

COSMO ELECTRONICS CORP
11F No 258 Lian-Cheng Rd
Chung-Ho District New Taipei 235
Taiwan

This certificate confirms that representative samples of:

FPQU2 - Optical Isolators - Component

See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

UL 1577, Edition 5, Issue Date 2014-04-25, Revision Date 2023-07-06

Additional Information:

See UL Product iQ® at <https://iq.ulprospector.com> for additional information.

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Look for the UL Recognized Component Mark on the product.



A handwritten signature in black ink, appearing to read 'David Piecuch'.

David Piecuch
UL Mark Certification Program Owner

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CERTIFICATE OF COMPLIANCE

Certificate number UL-US-L169586-31-52507002-2
Report reference E169586-20070525
Date 2025-01-15



Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact UL Solutions Customer Service at <https://www.ul.com/contact-us>.

CERTIFICATE OF COMPLIANCE

Certificate number UL-US-L169586-31-52507002-2
Report reference E169586-20070525
Date 2025-01-15

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Model	Product Description
1210, , may be prefixed with KP or KPC. May be suffixed with any letter.	Optical isolators, double protection type, providing 5000 V ac isolation
1510, , may be prefixed with KP or KPC. May be suffixed with any letter.	Optical isolators, double protection type, providing 5000 V ac isolation
161L, , may be prefixed with KTLP. May be suffixed with any letter.	Optical isolators, double protection type, providing 3750 V ac isolation
250, , may be prefixed with KTLP. May be suffixed with any letter.	Optical isolators, double protection type, providing 5000 V ac isolation
2601, , may be prefixed with KPC. May be suffixed with any letter.	Double protection optical isolators at 5000 Vac isolation voltage
2611, , may be prefixed with KPC. May be suffixed with any letter.	Double protection optical isolators at 5000 Vac isolation voltage
312, , may be prefixed with KPC. May be suffixed with any letter.	Double protection optical isolators at 3750 Vac isolation voltage
315, , may be prefixed with KPC. May be suffixed with any letter.	Double protection optical isolators at 3750 Vac isolation voltage
350, , may be prefixed with KTLP. May be suffixed with any letter.	Optical isolators, double protection type, providing 5000 V ac isolation
3502, , may be prefixed with KTLP. May be suffixed with any letter.	Optical isolators, double protection type, providing 5300 V ac isolation
3503, , may be prefixed with KTLP. May be suffixed with any letter.	Optical isolators, double protection type, providing 5300 V ac isolation
3506, , may be prefixed with KTLP. May be suffixed with any letter.	Optical isolators, double protection type, providing 5300 V ac isolation
3507, , may be prefixed with KTLP. May be suffixed with any letter.	Optical isolators, double protection type, providing 5300 V ac isolation
351, , may be prefixed with KTLP. May be suffixed with any letter.	Optical isolators, double protection type, providing 5000 V ac isolation
3616, , may be prefixed with KTLP. May be suffixed with any letter.	Optical isolators, double protection type, providing 5300 V ac isolation
3617, , may be prefixed with KTLP. May be suffixed with any letter.	Optical isolators, double protection type, providing 5300 V ac isolation
400, , may be prefixed with KPC. May be suffixed with any letter.	Double protection optical isolators at 3750 Vac isolation voltage
410, , may be prefixed with KPC. May be suffixed with any letter.	Optical isolators, double protection type, providing 3750 V ac isolation
456, , may be prefixed with KPC. May be suffixed with any letter.	Double protection optical isolators at 3750 Vac isolation voltage
457, , may be prefixed with KPC. May be suffixed with any letter.	Optical isolators, double protection type, providing 3750 V ac isolation
483, , may be prefixed with KPC. May be suffixed with any letter.	Double protection optical isolators at 3750 Vac isolation voltage



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CERTIFICATE OF COMPLIANCE

Certificate number UL-US-L169586-31-52507002-2
Report reference E169586-20070525
Date 2025-01-15

484, , may be prefixed with KPC. May be suffixed with any letter.	Double protection optical isolators at 3750 Vac isolation voltage
611, , may be prefixed with KPC. May be suffixed with any letter.	Double protection optical isolators at 3750 Vac isolation voltage
615, , may be prefixed with KPC. May be suffixed with any letter.	Double protection optical isolators at 3750 Vac isolation voltage
6N137, , may be prefixed with KPC. May be suffixed with any letter.	Optical isolators, double protection type, providing 5000 V ac isolation
851, , may be prefixed with KP or KPC. May be suffixed with any letter.	Optical isolators, double protection type, providing 5000 V ac isolation
H11L1, , may be suffixed with any letter.	Double protection optical isolators at 3750 Vac isolation voltage
H11L2, , may be suffixed with any letter.	Double protection optical isolators at 5000 Vac isolation voltage
H11L3, , may be suffixed with any letter.	Double protection optical isolators at 5000 Vac isolation voltage
KTLP350 (a)	Optical isolators, double protection type, providing 5000 V ac isolation
KTLP3502 (a)	Optical isolators, double protection type, providing 5300 V ac isolation
KTLP3503 (a)	Optical isolators, double protection type, providing 5300 V ac isolation
KTLP3506 (a)	Optical isolators, double protection type, providing 5300 V ac isolation
KTLP3507 (a)	Optical isolators, double protection type, providing 5300 V ac isolation
KTLP351 (a)	Optical isolators, double protection type, providing 5000 V ac isolation
KTLP3616 (a)	Optical isolators, double protection type, providing 5300 V ac isolation
KTLP3617 (a)	Optical isolators, double protection type, providing 5300 V ac isolation



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Certificate of Compliance

Certificate Number:

UL-CA-L169586-41-
52507002-2

Report Reference:

E169586-20070525

Issue Date:

2025-01-15

Issued to:

**COSMO ELECTRONICS CORP
11F No 258 Lian-Cheng Rd
Chung-Ho District New Taipei 235
Taiwan**

This certificate confirms that representative samples of:

FPQU8 - Optical Isolators Certified for Canada - Component

See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

**CSA Component Acceptance Service Notice No. 5A, Issue Date:
1998-01-23**

Additional Information:

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Look for the UL Recognized Component Mark on the product.



A handwritten signature in black ink, appearing to read 'David Piecuch'.

David Piecuch
UL Mark Certification Program Owner

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CERTIFICATE OF COMPLIANCE

Certificate number UL-CA-L169586-41-52507002-2
Report reference E169586-20070525
Date 2025-01-15

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Model	Product Description
1210, , may be prefixed with KP or KPC. May be suffixed with any letter.	Optical isolators, double protection type, providing 5000 V ac isolation
1510, , may be prefixed with KP or KPC. May be suffixed with any letter.	Optical isolators, double protection type, providing 5000 V ac isolation
161L, , may be prefixed with KTLP. May be suffixed with any letter.	Optical isolators, double protection type, providing 3750 V ac isolation
250, , may be prefixed with KTLP. May be suffixed with any letter.	Optical isolators, double protection type, providing 5000 V ac isolation
2601, , may be prefixed with KPC. May be suffixed with any letter.	Double protection optical isolators at 5000 Vac isolation voltage
2611, , may be prefixed with KPC. May be suffixed with any letter.	Double protection optical isolators at 5000 Vac isolation voltage
312, , may be prefixed with KPC. May be suffixed with any letter.	Double protection optical isolators at 3750 Vac isolation voltage
315, , may be prefixed with KPC. May be suffixed with any letter.	Double protection optical isolators at 3750 Vac isolation voltage
350, , may be prefixed with KTLP. May be suffixed with any letter.	Optical isolators, double protection type, providing 5000 V ac isolation
3502, , may be prefixed with KTLP. May be suffixed with any letter.	Optical isolators, double protection type, providing 5300 V ac isolation
3503, , may be prefixed with KTLP. May be suffixed with any letter.	Optical isolators, double protection type, providing 5300 V ac isolation
3506, , may be prefixed with KTLP. May be suffixed with any letter.	Optical isolators, double protection type, providing 5300 V ac isolation
3507, , may be prefixed with KTLP. May be suffixed with any letter.	Optical isolators, double protection type, providing 5300 V ac isolation
351, , may be prefixed with KTLP. May be suffixed with any letter.	Optical isolators, double protection type, providing 5000 V ac isolation
3616, , may be prefixed with KTLP. May be suffixed with any letter.	Optical isolators, double protection type, providing 5300 V ac isolation
3617, , may be prefixed with KTLP. May be suffixed with any letter.	Optical isolators, double protection type, providing 5300 V ac isolation
400, , may be prefixed with KPC. May be suffixed with any letter.	Double protection optical isolators at 3750 Vac isolation voltage
410, , may be prefixed with KPC. May be suffixed with any letter.	Optical isolators, double protection type, providing 3750 V ac isolation
456, , may be prefixed with KPC. May be suffixed with any letter.	Double protection optical isolators at 3750 Vac isolation voltage
457, , may be prefixed with KPC. May be suffixed with any letter.	Optical isolators, double protection type, providing 3750 V ac isolation
483, , may be prefixed with KPC. May be suffixed with any letter.	Double protection optical isolators at 3750 Vac isolation voltage



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CERTIFICATE OF COMPLIANCE

Certificate number UL-CA-L169586-41-52507002-2
Report reference E169586-20070525
Date 2025-01-15

484, , may be prefixed with KPC. May be suffixed with any letter.	Double protection optical isolators at 3750 Vac isolation voltage
611, , may be prefixed with KPC. May be suffixed with any letter.	Double protection optical isolators at 3750 Vac isolation voltage
615, , may be prefixed with KPC. May be suffixed with any letter.	Double protection optical isolators at 3750 Vac isolation voltage
6N137, , may be prefixed with KPC. May be suffixed with any letter.	Optical isolators, double protection type, providing 5000 V ac isolation
851, , may be prefixed with KP or KPC. May be suffixed with any letter.	Optical isolators, double protection type, providing 5000 V ac isolation
H11L1, , may be suffixed with any letter.	Double protection optical isolators at 3750 Vac isolation voltage
H11L2, , may be suffixed with any letter.	Double protection optical isolators at 5000 Vac isolation voltage
H11L3, , may be suffixed with any letter.	Double protection optical isolators at 5000 Vac isolation voltage



Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact UL Solutions Customer Service at <https://www.ul.com/contact-us>.

Certificate of Compliance

Certificate Number:

UL-US-L169586-31-
02407002-1

Report Reference:

E169586-20070420

Issue Date:

2024-12-12

Issued to:

COSMO ELECTRONICS CORP
11F No 258 Lian-Cheng Rd
Chung-Ho District New Taipei 235
Taiwan

This certificate confirms that representative samples of:

FPQU2 - Optical Isolators - Component

See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

UL 1577, Edition 5, Issue Date 2014-04-25, Revision Date 2023-07-06

Additional Information:

See UL Product iQ® at <https://iq.ulprospector.com> for additional information.

This Certificate of Compliance indicates that representative samples of the product described in the certification report have met the requirements for UL certification. It does not provide authorization to apply the UL Recognized Component Mark. Only the Authorization Page that references the Follow-Up Services Procedure for ongoing surveillance provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.



A handwritten signature in black ink, appearing to read 'David Piecuch'.

David Piecuch
UL Mark Certification Program Owner

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact UL Solutions Customer Service at <https://www.ul.com/contact-us>.

CERTIFICATE OF COMPLIANCE

Certificate number UL-US-L169586-31-02407002-1
Report reference E169586-20070420
Date 2024-12-12



Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact UL Solutions Customer Service at <https://www.ul.com/contact-us>.

CERTIFICATE OF COMPLIANCE

Certificate number UL-US-L169586-31-02407002-1
Report reference E169586-20070420
Date 2024-12-12

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Model	Product Description
V212G2A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
V212GA, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
V213, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
V213A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
V213S, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 1500 V ac isolation
V216, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
V216A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
V216S, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 1500 V ac isolation
V253, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
V253A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
V254, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
V254A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
V255G2A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
V255G3A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
V258A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
V271A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
V272A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
V273, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
V412, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
V412A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
V412S, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 1500 V ac isolation



Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact UL Solutions Customer Service at <https://www.ul.com/contact-us>.

CERTIFICATE OF COMPLIANCE

Certificate number UL-US-L169586-31-02407002-1
Report reference E169586-20070420
Date 2024-12-12

W212G2A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
W212G2S, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 1500 Vac isolation voltage
W212GA, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
W212GS, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 1500 Vac isolation voltage
W213, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
W213A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
W213S, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 1500 V ac isolation
W216, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
W216, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
W216A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
W216A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
W216S, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 1500 Vac isolation voltage
W216S, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 1500 V ac isolation
W412, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
W412A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
W412S, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 1500 Vac isolation voltage
Y212G2A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
Y212G2S, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 1500 Vac isolation voltage
Y212GA, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
Y212GS, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 1500 Vac isolation voltage
Y213, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
Y213A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
Y213S, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 1500 Vac isolation voltage
Y216, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage



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CERTIFICATE OF COMPLIANCE

Certificate number UL-US-L169586-31-02407002-1
Report reference E169586-20070420
Date 2024-12-12

Y216A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
Y216S, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 1500 Vac isolation voltage
Y255G2A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
Y255G2S, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 1500 Vac isolation voltage
Y412, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
Y412A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
Y412S, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 1500 Vac isolation voltage



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Certificate of Compliance

Certificate Number:

UL-CA-L169586-41-
02407002-1

Report Reference:

E169586-20070420

Issue Date:

2024-12-12

Issued to:

**COSMO ELECTRONICS CORP
11F No 258 Lian-Cheng Rd
Chung-Ho District New Taipei 235
Taiwan**

This certificate confirms that representative samples of:

FPQU8 - Optical Isolators Certified for Canada - Component

See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

**CSA Component Acceptance Service Notice No. 5A, Issue Date:
1998-01-23**

Additional Information:

See UL Product iQ® at <https://iq.ulprospector.com> for additional information.

This Certificate of Compliance indicates that representative samples of the product described in the certification report have met the requirements for UL certification. It does not provide authorization to apply the UL Recognized Component Mark. Only the Authorization Page that references the Follow-Up Services Procedure for ongoing surveillance provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.



A handwritten signature in black ink, appearing to read 'David Piecuch'.

David Piecuch
UL Mark Certification Program Owner

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact UL Solutions Customer Service at <https://www.ul.com/contact-us>.

CERTIFICATE OF COMPLIANCE

Certificate number UL-CA-L169586-41-02407002-1
Report reference E169586-20070420
Date 2024-12-12

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Model	Product Description
V212G2A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
V212GA, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
V213, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
V213A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
V216, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
V216A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
V253, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
V253A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
V254, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
V254A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
V255G2A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
V255G3A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
V258A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
V271A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
V272A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
V273, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
V412, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
V412A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
W212G2A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
W212GA, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
W213, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation



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CERTIFICATE OF COMPLIANCE

Certificate number UL-CA-L169586-41-02407002-1
Report reference E169586-20070420
Date 2024-12-12

W213A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
W216, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
W216, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
W216A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
W216A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
W412, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Optical isolators, double protection type, providing 5000 V ac isolation
W412A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
Y212G2A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
Y212GA, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
Y213, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
Y213A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
Y216, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
Y216A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
Y255G2A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
Y412, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage
Y412A, , may be followed by any additional numbers or letters. All models may be prefixed with KAQ.	Double protection optical isolators at 5000 Vac isolation voltage



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Certificate of Compliance

Certificate Number:

UL-US-2004411-1

Report Reference:

E169586-20101221

Issue Date:

2024-03-04

Issued to:

COSMO ELECTRONICS CORP
11F No 258 Lian-Cheng Rd
Chung-Ho District New Taipei 235
Taiwan

This certificate confirms that representative samples of:

FPQU2 - Optical Isolators - Component

See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

UL 1577, Edition 5, Issue Date 2014-04-25, Revision Date 2023-07-06

Additional Information:

See UL Product iQ® at <https://iq.ulprospector.com> for additional information.

This Certificate of Compliance indicates that representative samples of the product described in the certification report have met the requirements for UL certification. It does not provide authorization to apply the UL Recognized Component Mark. Only the Authorization Page that references the Follow-Up Services Procedure for ongoing surveillance provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.



David Piecuch
UL Mark Certification Program Manager



Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact UL Solutions Customer Service at <https://www.ul.com/contact-us>.

CERTIFICATE OF COMPLIANCE

Certificate number UL-US-2004411-1
Report reference E169586-20101221
Date 2024-03-04

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Model	Product Description
10XX, where XX represents current transfer ratio (CTR) ranking from 00 through ZZ, may be prefixed with KT, models may be followed by any letter and/or number.	Optical isolators, double protection type, providing 5000 V ac isolation
11XX, where XX represents current transfer ratio (CTR) ranking from 00 through ZZ, may be prefixed with KT, models may be followed by any letter and/or number.	Optical isolators, double protection type, providing 5000 V ac isolation
12XX, where XX represents current transfer ratio (CTR) ranking from 00 through ZZ, may be prefixed with KT, models may be followed by any letter and/or number.	Optical isolators, double protection type, providing 5000 V ac isolation
13XX, where XX represents current transfer ratio (CTR) ranking from 00 through ZZ, may be prefixed with KT, models may be followed by any letter and/or number.	Optical isolators, double protection type, providing 5000 V ac isolation
14XX, where XX represents current transfer ratio (CTR) ranking from 00 through ZZ, may be prefixed with KT, models may be followed by any letter and/or number.	Optical isolators, double protection type, providing 5000 V ac isolation
16XX, where XX represents current transfer ratio (CTR) ranking from 00 through ZZ, may be prefixed with KT, models may be followed by any letter and/or number.	Optical isolators, double protection type, providing 5000 V ac isolation
KAT101X, where X represents current transfer ratio (CTR) ranking from 0 through ZZ. May be suffixed with additional letters and/or numbers.	Double protection optical isolators at 5000 Vac isolation voltage



David Piecuch
UL Mark Certification Program Manager

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact UL Solutions Customer Service at <https://www.ul.com/contact-us>.



Certificate of Compliance

Certificate Number:

UL-CA-2002966-1

Report Reference:

E169586-20101221

Issue Date:

2024-03-04

Issued to:

COSMO ELECTRONICS CORP
11F No 258 Lian-Cheng Rd
Chung-Ho District New Taipei 235
Taiwan

This certificate confirms that representative samples of:

FPQU8 - Optical Isolators Certified for Canada - Component

See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

CSA Component Acceptance Service Notice No. 5A, Issue Date:
1998-01-23

Additional Information:

See UL Product iQ® at <https://iq.ulprospector.com> for additional information.

This Certificate of Compliance indicates that representative samples of the product described in the certification report have met the requirements for UL certification. It does not provide authorization to apply the UL Recognized Component Mark. Only the Authorization Page that references the Follow-Up Services Procedure for ongoing surveillance provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.



David Piecuch
UL Mark Certification Program Manager



Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact UL Solutions Customer Service at <https://www.ul.com/contact-us>.

CERTIFICATE OF COMPLIANCE

Certificate number UL-CA-2002966-1
Report reference E169586-20101221
Date 2024-03-04

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Model	Product Description
10XX, where XX represents current transfer ratio (CTR) ranking from 00 through ZZ, may be prefixed with KT, models may be followed by any letter and/or number.	Optical isolators, double protection type, providing 5000 V ac isolation
11XX, where XX represents current transfer ratio (CTR) ranking from 00 through ZZ, may be prefixed with KT, models may be followed by any letter and/or number.	Optical isolators, double protection type, providing 5000 V ac isolation
12XX, where XX represents current transfer ratio (CTR) ranking from 00 through ZZ, may be prefixed with KT, models may be followed by any letter and/or number.	Optical isolators, double protection type, providing 5000 V ac isolation
13XX, where XX represents current transfer ratio (CTR) ranking from 00 through ZZ, may be prefixed with KT, models may be followed by any letter and/or number.	Optical isolators, double protection type, providing 5000 V ac isolation
14XX, where XX represents current transfer ratio (CTR) ranking from 00 through ZZ, may be prefixed with KT, models may be followed by any letter and/or number.	Optical isolators, double protection type, providing 5000 V ac isolation
16XX, where XX represents current transfer ratio (CTR) ranking from 00 through ZZ, may be prefixed with KT, models may be followed by any letter and/or number.	Optical isolators, double protection type, providing 5000 V ac isolation
KAT101X, where X represents current transfer ratio (CTR) ranking from 0 through ZZ. May be suffixed with additional letters and/or numbers.	Double protection optical isolators at 5000 Vac isolation voltage



David Piecuch
UL Mark Certification Program Manager

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact UL Solutions Customer Service at <https://www.ul.com/contact-us>.



Certificate of Compliance

Certificate Number:

[E169586]

Report Reference:

E169586-20241018

Issue Date:

2024-OCTOBER-18

Issued to:

COSMO ELECTRONICS CORP

11F No 258 Lian-Cheng Rd

Chung-Ho District

New Taipei, 235 Taiwan

This certificate confirms that representative samples of:

Optical Isolators - Component

See Addendum page for Model/Product

Have been evaluated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC

[UL 1577 - Standard for Optical Isolators]

Additional Information:

See UL Product iQ® at <https://iq.ulprospector.com> for additional information.

This Certificate of Compliance indicates that representative samples of the product described in the certification report have met the requirements for UL certification. It does not provide authorization to apply the UL Recognized Component Mark. Only the Authorization Page that references the Follow-Up Services Procedure for ongoing surveillance provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.



David Piecuch

UL Mark Certification Program Owner



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Certificate of Compliance

Certificate Number: E169586
Report Reference: E169586-20241018
Issue Date: 2024-OCTOBER-18

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Models :

Single Protected optical isolators having an isolation voltage of 5000 Vac - KT330J, KT331J, KT332J, KT333J, KT5214



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