

NO: PMS - 024	PRODUCT: Photomicrosensors – Multiple Versions
DATE: November 2020	TYPE: Discontinuation

Multiple Photomicrosensors- Discontinuation

In an effort to streamline our product offering and focus on popular models of Omron’s line of Photomicrosensors, OMRON will discontinue multiple Photomicrosensor models due to reduced global sales and aged tooling that will not be maintained in the future. The suggested replacements are listed below. Please carefully read through this notification and note the differences. The following details will fully explain the discontinuation and suggested replacement considerations; should you have any additional questions, however, please communicate with the Sensor Product Manager, Cary Horan.

LAST ORDER DATE (Last Time Buy Date)

March 19, 2021

Product Discontinuation		Suggested Replacement
Model EE-□109		No suggested replacement
Model EE-SA□07-P2		No suggested replacement
Model EE-SB5-B		Model EE-SB5
Model EE-SG3-B		Model EE-SX1088
Model EE-SH3(-□)		Model EE-SX1088 or Model EE-SX1096
Model EE-SX1023-W1		Model EE-SX1088-W11
Model EE-SX1057		Model EE-SX1071
Model EE-SX1115		Model EE-SX1042
Model EE-SX1235A-P2		No suggested replacement
Model EE-SX□01		Model EE-SX□98
Model EE-SX□239-P2		No suggested replacement
Model EE-SX4235A-P2(-5)		No suggested replacement
Model EE-SY□13		Model EE-SY□10
Model EE-SPY415		Model B5W-LB2112-1

Discontinued Models and Suggested replacement:

Discontinued Models	Suggested replacement
EE-L109	No suggested replacement
EE-SA107-P2	No suggested replacement
EE-SA407-P2	No suggested replacement
EE-SB5-B	EE-SB5
EE-SG3-B	EE-SX1088
EE-SH3	EE-SX1088
EE-SH3-B	EE-SX1088
EE-SH3-C	EE-SX1088
EE-SH3-CS	EE-SX1088
EE-SH3-D	EE-SX1088
EE-SH3-DS	EE-SX1096
EE-SH3-G	EE-SX1096
EE-SH3-GS	EE-SX1096
EE-SX1023-W1	EE-SX1088-W11
EE-SX1057	EE-SX1071
EE-SX1115	EE-SX1042
EE-SX1235A-P2	No suggested replacement
EE-SX301	EE-SX398
EE-SX3239-P2	No suggested replacement
EE-SX401	EE-SX498
EE-SX4235A-P2	No suggested replacement
EE-SX4235A-P2-5	No suggested replacement
EE-SX4239-P2	No suggested replacement
EE-SY313	EE-SY310
EE-SY413	EE-SY410
EE-TP109	No suggested replacement
EE-SPY415	B5W-LB2112-1

Differences from discontinued product:

Suggested Replacement Model	Body Color	Dimensions	Wire connection	Mounting Dimensions	Characteristics	Operation ratings	Operation methods
EE-SB5	**	**	**	*	**	-	-
EE-SX1088	**	--	**	--	*	-	-
EE-SX1096	**	--	**	--	*	-	-
EE-SX1088-W11	**	--	**	--	*	-	-
EE-SX1071	**	--	**	*	*	-	-
EE-SX1042	**	*	**	**	*	-	-
EE-SX398	**	--	**	*	*	-	-
EE-SX498	**	--	**	*	*	-	-
EE-SY310	**	*	**	**	*	-	-
EE-SY410	**	*	**	**	*	-	-
B5W-LB2112-1	**	--	*	--	--	-	-



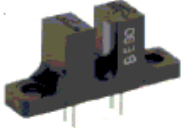

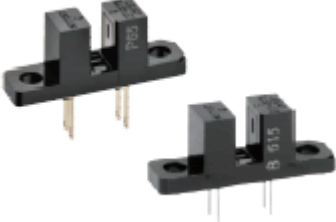





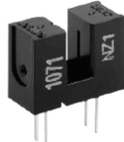
** : Compatible

* : The change is a little/Almost compatible

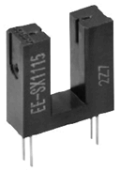







-- : Not compatible

- : No corresponding specification


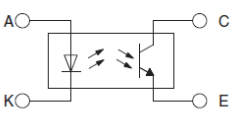
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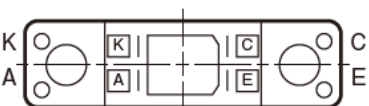
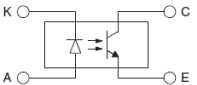

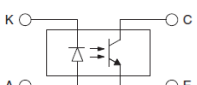
Discontinued Model EE-SB5-B	Suggested replacement Model EE-SB5
<p>Black</p> 	<p>Black</p> 
Discontinued Model EE-SG3-B	Suggested replacement Model EE-SX1088
<p>Black</p> 	<p>Black</p> 
Discontinued Model EE-SH3(-□)	Suggested replacement Model EE-SX1088 or EE-SX1096
<p>Black</p> 	<p>Black</p> <p>Model EE-SX1088 Model EE-SX1096</p>  
Discontinued Model EE-SX1023-W1	Suggested replacement Model EE-SX1088-W11
<p>Black</p> 	<p>Black</p> 
Discontinued Model EE-SX1057	Suggested replacement Model EE-SX1071
<p>Black</p> 	<p>Black</p> 

Body Color (Continued):

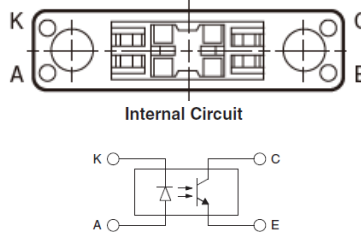
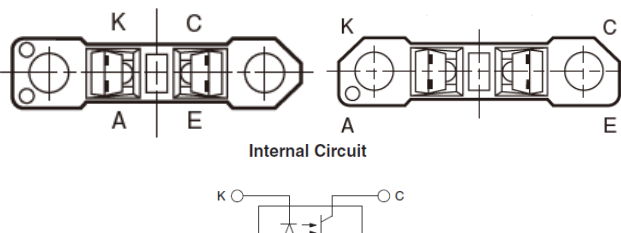
Discontinued Model EE-SX1115	Suggested replacement Model EE-SX1042
<p>Black</p> 	<p>Black</p> 
Discontinued Model EE-SX□01	Suggested replacement Model EE-SX□98
<p>Black</p> 	<p>Black</p> 
Discontinued Model EE-SY□13	Suggested replacement Model EE-SY□10
<p>Black</p> 	<p>Black</p> 
Discontinued Model EE-SPY415	Suggested replacement Model B5W-LB2112-1
<p>Black</p> 	<p>Black</p> 

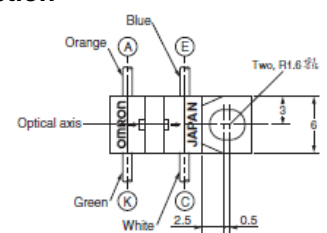
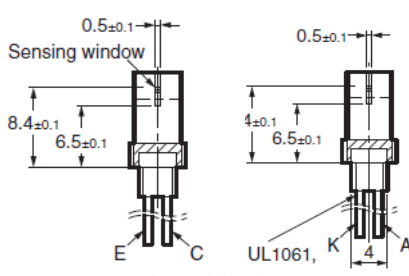
Wire connection:

Discontinued Model EE-SB5-B	Suggested replacement Model EE-SB5										
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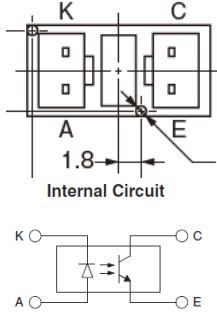
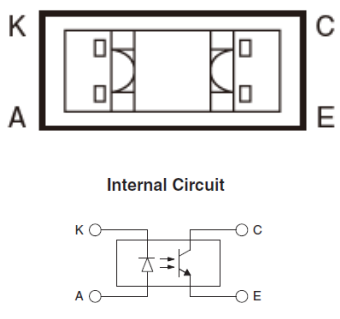
Discontinued Model EE-SG3-B	Suggested replacement Model EE-SX1088																				
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Wire connection (Continued):

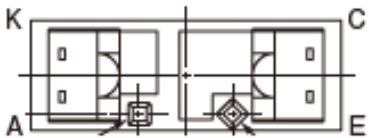
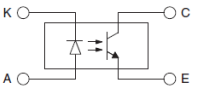
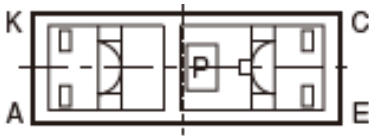
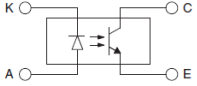
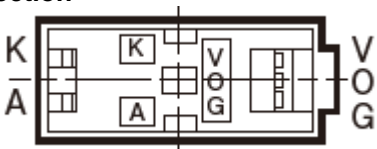
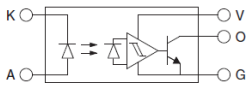
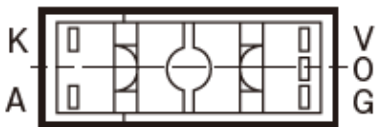
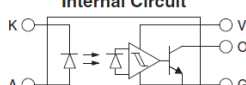
Discontinued Model EE-SH3(-□)	Suggested replacement Model EE-SX1088 / EE-SX1096																				
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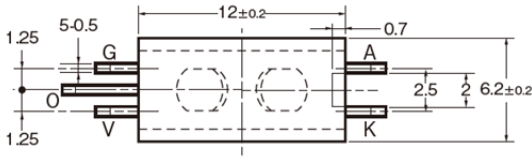
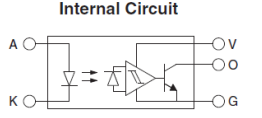
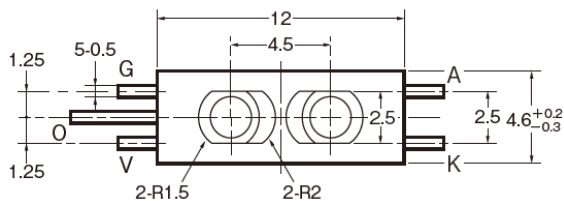
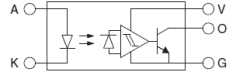
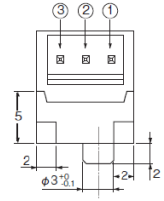
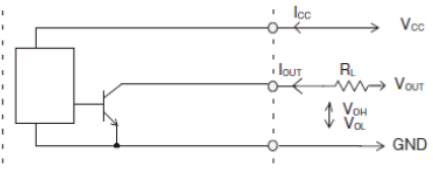
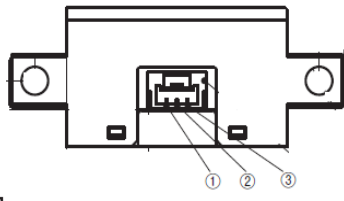
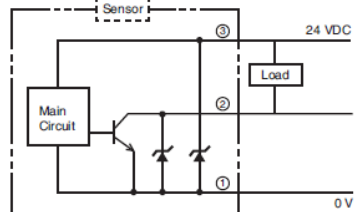
Wire connection (Continued):

Discontinued Model EE-SX1057	Suggested replacement Model EE-SX1071																				
<p>Wire connection</p>  <p>Internal Circuit</p> <table border="1" data-bbox="344 619 548 745"> <thead> <tr> <th>Terminal No.</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Anode</td> </tr> <tr> <td>K</td> <td>Cathode</td> </tr> <tr> <td>C</td> <td>Collector</td> </tr> <tr> <td>E</td> <td>Emitter</td> </tr> </tbody> </table>	Terminal No.	Name	A	Anode	K	Cathode	C	Collector	E	Emitter	<p>Wire connection</p>  <p>Internal Circuit</p> <table border="1" data-bbox="1019 619 1224 745"> <thead> <tr> <th>Terminal No.</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Anode</td> </tr> <tr> <td>K</td> <td>Cathode</td> </tr> <tr> <td>C</td> <td>Collector</td> </tr> <tr> <td>E</td> <td>Emitter</td> </tr> </tbody> </table>	Terminal No.	Name	A	Anode	K	Cathode	C	Collector	E	Emitter
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Wire connection (Continued):

Discontinued Model EE-SX1115	Suggested replacement Model EE-SX1042																								
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Wire connection (Continued):

Discontinued Model EE-SY□13	Suggested replacement Model EE-SY□10																								
<p>Wire connection</p>  <p>Internal Circuit</p>  <table border="1" data-bbox="316 619 576 787"> <thead> <tr> <th>Terminal No.</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Anode</td> </tr> <tr> <td>K</td> <td>Cathode</td> </tr> <tr> <td>V</td> <td>Power supply (Vcc)</td> </tr> <tr> <td>O</td> <td>Output (OUT)</td> </tr> <tr> <td>G</td> <td>Ground (GND)</td> </tr> </tbody> </table>	Terminal No.	Name	A	Anode	K	Cathode	V	Power supply (Vcc)	O	Output (OUT)	G	Ground (GND)	<p>Wire connection</p>  <p>Internal Circuit</p>  <table border="1" data-bbox="998 619 1242 787"> <thead> <tr> <th>Terminal No.</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Anode</td> </tr> <tr> <td>K</td> <td>Cathode</td> </tr> <tr> <td>V</td> <td>Power supply (Vcc)</td> </tr> <tr> <td>O</td> <td>Output (OUT)</td> </tr> <tr> <td>G</td> <td>Ground (GND)</td> </tr> </tbody> </table>	Terminal No.	Name	A	Anode	K	Cathode	V	Power supply (Vcc)	O	Output (OUT)	G	Ground (GND)
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Dimensions:

Discontinued Model EE-SB5-B	Suggested replacement Model EE-SB5
<p>Dimensions W × L × H: 6.35mm × 25.4mm × 11.5mm</p>	<p>Dimensions W × L × H: 6.35mm × 25.4mm × 11.5mm</p>

Discontinued Model EE-SG3-B	Suggested replacement Model EE-SX1088
<p>Dimensions W × L × H: 6.35mm × 25.4mm × 11.5mm Slot width: 3.6mm</p>	<p>Dimensions W × L × H: 6mm × 25mm × 10mm Slot width: 3.4mm</p>

Dimensions (Continued):

**Discontinued Model
EE-SH3(-□)**

Dimensions
 $W \times L \times H: 6.2\text{mm} \times 25.4\text{mm} \times 10.4\text{mm}$
 Slot width: 3.4mm

Model	Aperture (a × b)	Model	Aperture (a × b)
EE-SH3	2.1 × 0.5	EE-SH3-B	2.1 × 0.5
EE-SH3-CS	2.1 × 1.0	EE-SH3-C	2.1 × 1.0
EE-SH3-DS	2.1 × 0.2	EE-SH3-D	2.1 × 0.2
EE-SH3-GS	0.5 × 2.1	EE-SH3-G	0.5 × 2.1

**Suggested replacement
Model EE-SX1088 / EE-SX1096**

Dimensions
 Model EE-SX1088
 $W \times L \times H: 6\text{mm} \times 25\text{mm} \times 10\text{mm}$
 Slot width: 3.4mm

Model EE-SX1096
 $W \times L \times H: 6\text{mm} \times 25\text{mm} \times 10\text{mm}$
 Slot width: 3.4mm

Dimensions (Continued):

<p align="center">Discontinued Model EE-SX1023-W1</p>	<p align="center">Suggested replacement Model EE-SX1088-W11</p>
<p>Dimensions W × L × H : 6mm × 15.2mm × 9.2mm Slot width : 2.1mm</p>	<p>Dimensions W × L × H : 6mm × 25mm × 13.1mm Slot width : 3.4mm</p>

<p align="center">Discontinued Model EE-SX1057</p>	<p align="center">Suggested replacement Model EE-SX1071</p>
<p>Dimensions W × L × H : 6.35mm × 13mm × 11.7mm Slot width : 3.6mm</p>	<p>Dimensions W × L × H : 6.2mm × 13.6mm × 10.4mm Slot width : 3.4mm</p>

Dimensions (Continued):

<p align="center">Discontinued Model EE-SX1115</p>	<p align="center">Suggested replacement Model EE-SX1042</p>
<p>Dimensions $W \times L \times H: 5\text{mm} \times 14\text{mm} \times 14.7\text{mm}$ Slot width: 5mm</p> <p>Technical drawing of discontinued model EE-SX1115. It includes a top view showing four slots with a width of 5mm and a pitch of 14mm. The total length is 14.5mm. The drawing also shows side views and cross-section AA, indicating a slot width of 5mm and a total height of 14.7mm. Specific features include four fillets with a radius of 0.1 (R0.1) and four chamfers with a 0.3mm angle (C0.3). The bottom view shows a grid with dimensions 1.75±0.1 and 4.2±0.1.</p>	<p>Dimensions $W \times L \times H: 5\text{mm} \times 14\text{mm} \times 14.7\text{mm}$ Slot width: 5mm</p> <p>Technical drawing of suggested replacement model EE-SX1042. It includes a top view showing four slots with a width of 5mm and a pitch of 14mm. The total length is 14.5mm. The drawing also shows side views and cross-section AA, indicating a slot width of 5mm and a total height of 14.7mm. Specific features include four chamfers with a 0.3mm angle (C0.3). The bottom view shows a grid with dimensions 1.75±0.1 and 4.2±0.1.</p>

<p align="center">Discontinued Model EE-SX□01</p>	<p align="center">Suggested replacement Model EE-SX□98</p>
<p>Dimensions $W \times L \times H: 6.2\text{mm} \times 15.4\text{mm} \times 10.4\text{mm}$ Slot width: 3.4mm</p> <p>Technical drawing of discontinued model EE-SX□01. It includes a top view showing five slots with a width of 3.4mm and a pitch of 15.4mm. The total length is 15.4mm. The drawing also shows side views and cross-section AA, indicating a slot width of 3.4mm and a total height of 10.4mm. Specific features include a center mark, optical axis, and five slots with a width of 0.25mm. The bottom view shows a grid with dimensions 9.5±0.3 and 2.5±0.2.</p>	<p>Dimensions $W \times L \times H: 5\text{mm} \times 12.2\text{mm} \times 10\text{mm}$ Slot width: 3mm</p> <p>Technical drawing of suggested replacement model EE-SX□98. It includes a top view showing five slots with a width of 3mm and a pitch of 12.2mm. The total length is 12.2mm. The drawing also shows side views and cross-section AA, indicating a slot width of 3mm and a total height of 10mm. Specific features include four chamfers with a 0.3mm angle (C0.3) and two chamfers with a 0.3mm angle (C1±0.3). The bottom view shows a grid with dimensions 9.2 and 2.5±0.1.</p>

Dimensions (Continued):

<p align="center">Discontinued Model EE-SY□13</p>	<p align="center">Suggested replacement Model EE-SY□10</p>
<p>Dimensions W × L × H: 6.2mm × 12mm × 6mm</p>	<p>Dimensions W × L × H: 4.6mm × 12mm × 4.8mm</p>

<p align="center">Discontinued Model EE-SPY415</p>	<p align="center">Suggested replacement Model B5W-LB2112-1</p>
<p>Dimensions W × L × H: 9.6mm × 45mm × 11mm</p>	<p>Dimensions W × L × H: 8.4mm × 40mm × 15.9mm</p>

Characteristics:

Item	Discontinued Model EE-SB5-B	Suggested replacement Model EE-SB5
Emitter Forward current	Maximum Ratings 50 mA	
Emitter Reverse voltage	Maximum Ratings 4 V	
Detector Collector–Emitter voltage	Maximum Ratings 30 V	
Detector Collector current	Maximum Ratings 20mA	
Detector Collector dissipation	Maximum Ratings 100 mW	
Operating temperature	-25°C ~ 80°C	
Storage temperature	-30°C ~ 80°C	
Emitter Forward voltage	TYP:1.2 V MAX:1.5 V (Conditions IF=30mA)	
Emitter Reverse current	TYP:0.01 uA MAX:10 uA (Conditions VR=4V)	
Emitter Peak emission wavelength	TYP: 940nm (Conditions IF=20mA)	
Detector Light current	MIN:200 uA MAX:2000 uA (Conditions IF=20mA, VCE=10V)	
Detector Dark current	TYP:2 nA MAX: 200 nA (VCE=10V, 0 lx)	
Detector Peak spectral sensitivity wavelength	TYP:850 nm (Conditions VCE=10V)	
Rising time	TYP:30 us (Conditions VCC=5V, RL=1kΩ, IL=1mA)	
Falling time	TYP:30 us (Conditions VCC=5V, RL=1kΩ, IL=1mA)	

Characteristics (Continued):

Item	Discontinued Model EE-SG3-B	Suggested replacement Model EE-SX1088
Emitter Forward current	Maximum Ratings 50 mA	
Emitter Reverse voltage	Maximum Ratings 4 V	
Detector Collector–Emitter voltage	Maximum Ratings 30 V	
Detector Collector current	Maximum Ratings 20mA	
Detector Collector dissipation	Maximum Ratings 100 mW	
Operating temperature	-25°C ~ 85°C	
Storage temperature	-40°C ~ 85°C	-30°C ~ 100°C
Emitter Forward voltage	TYP:1.2 V MAX:1.5 V (Conditions IF=30mA)	
Emitter Reverse current	TYP:0.01 μ A MAX:10 μ A (Conditions VR=4V)	
Emitter Peak emission wavelength	TYP: 940nm (Conditions IF=30mA)	TYP: 940nm (Conditions IF=20mA)
Detector Light current	MIN:2 mA MAX:40 mA (Conditions IF=15mA, VCE=10V)	MIN:0.5 mA MAX:14 mA (Conditions IF=20mA, VCE=10V)
Detector Dark current	TYP:2 nA MAX: 200 nA (VCE=10V, 0 lx)	TYP:2 nA MAX: 200 nA (VCE=10V, 0 lx)
Detector Collector–Emitter saturated voltage	TYP:0.1 V MAX: 0.4 V (Conditions IF=20mA, IL=0.3mA)	TYP:0.15 V MAX: 0.4 V (Conditions IF=20mA, IL=0.1mA)
Detector Peak spectral sensitivity wavelength	TYP:850 nm (Conditions VCE=10V)	
Rising time	TYP:4 μ s (Conditions VCC=5V, RL=100 Ω , IL=5mA)	
Falling time	TYP:4 μ s (Conditions VCC=5V, RL=100 Ω , IL=5mA)	

Characteristics (Continued):

Item	Discontinued Model EE-SH3(-□)	Suggested replacement Model EE-SX1088 / EE-SX1096
Emitter Forward current	Maximum Ratings 50 mA	
Emitter Reverse voltage	Maximum Ratings 4 V	
Detector Collector–Emitter voltage	Maximum Ratings 30 V	
Detector Collector current	Maximum Ratings 20mA	
Detector Collector dissipation	Maximum Ratings 100 mW	
Operating temperature	-25°C ~ 85°C	
Storage temperature	-30°C ~ 100°C	
Emitter Forward voltage	TYP:1.2 V MAX:1.5 V (Conditions IF=30mA)	
Emitter Reverse current	TYP:0.01 μ A MAX:10 μ A (Conditions VR=4V)	
Emitter Peak emission wavelength	TYP: 940nm (Conditions IF=20mA)	
Detector Light current	EE-SH3/EE-SH3-B MIN:0.5 mA MAX:14 mA EE-SH3-C/EE-SH3-CS MIN:1 mA MAX:28 mA EE-SH3-D/EE-SH3-DS MIN:0.1 mA EE-SH3-G/EE-SH3-GS MIN:0.5 mA MAX:14 mA (Conditions IF=20mA, VCE=10V)	MIN:0.5 mA MAX:14 mA (Conditions IF=20mA, VCE=10V)
Detector Dark current	TYP:2 nA MAX: 200 nA (VCE=10V, 0 lx)	
Detector Collector–Emitter saturated voltage	EE-SH3/EE-SH3-B/EE-SH3-C/ EE-SH3-CS TYP:0.1 V MAX: 0.4 V EE-SH3-D/EE-SH3-DS TYP: - MAX: - EE-SH3-G/EE-SH3-GS TYP:0.1 V MAX: 0.4 V (Conditions IF=20mA, IL=0.1mA)	EE-SX1088 TYP:0.15 V MAX: 0.4 V EE-SX1096 TYP:0.15 V MAX: 0.4 V (Conditions IF=20mA, IL=0.1mA)
Detector Peak spectral sensitivity wavelength	TYP:850 nm (Conditions VCE=5V)	
Rising time	TYP:4 μ s (Conditions VCC=5V, RL=100 Ω , IL=5mA)	
Falling time	TYP:4 μ s (Conditions VCC=5V, RL=100 Ω , IL=5mA)	

Characteristics (Continued):

Item	Discontinued Model EE-SX1023-W1	Suggested replacement Model EE-SX1088-W11
Emitter Forward current	Maximum Ratings 50 mA	
Emitter Reverse voltage	Maximum Ratings 4 V	
Detector Collector–Emitter voltage	Maximum Ratings 30 V	
Detector Collector current	Maximum Ratings 20mA	
Detector Collector dissipation	Maximum Ratings 100 mW	
Operating temperature	-25°C ~ 85°C	-25°C ~ 80°C
Storage temperature	-30°C ~ 100°C	-25°C ~ 85°C
Emitter Forward voltage	TYP:1.2 V MAX:1.5 V (Conditions IF=30mA)	
Emitter Reverse current	TYP:0.01 μ A MAX:10 μ A (Conditions VR=4V)	
Emitter Peak emission wavelength	TYP: 940nm (Conditions IF=20mA)	
Detector Light current	MIN:0.5 mA (Conditions IF=20mA, VCE=5V)	MIN:0.5 mA MAX:14 mA (Conditions IF=20mA, VCE=10V)
Detector Dark current	TYP:2 nA MAX: 200 nA (VCE=10V, 0 lx)	
Detector Collector–Emitter saturated voltage	TYP:0.1 V MAX: 0.4 V (Conditions IF=20mA, IL=0.1mA)	TYP:0.15 V MAX: 0.4 V (Conditions IF=20mA, IL=0.1mA)
Detector Peak spectral sensitivity wavelength	TYP:850 nm (Conditions VCE=5V)	
Rising time	TYP:4 μ s (Conditions VCC=5V, RL=100 Ω , IL=5mA)	
Falling time	TYP:4 μ s (Conditions VCC=5V, RL=100 Ω , IL=5mA)	

Characteristics (Continued):

Item	Discontinued Model EE-SX1057	Suggested replacement Model EE-SX1071
Emitter Forward current	Maximum Ratings 50 mA	
Emitter Reverse voltage	Maximum Ratings 4 V	
Detector Collector–Emitter voltage	Maximum Ratings 30 V	
Detector Emitter-Collector voltage	Maximum Ratings 5 V	-
Detector Collector current	Maximum Ratings 20mA	
Detector Collector dissipation	Maximum Ratings 100 mW	
Operating temperature	-25°C ~ 85°C	-25°C ~ 80°C
Storage temperature	-30°C ~ 100°C	-25°C ~ 85°C
Emitter Forward voltage	TYP:1.15 V MAX:1.5 V (Conditions IF=30mA)	TYP:1.2 V MAX:1.5 V (Conditions IF=30mA)
Emitter Reverse current	TYP:0.01 uA MAX:10 uA (Conditions VR=4V)	
Emitter Peak emission wavelength	TYP: 940nm (Conditions IF=20mA)	
Detector Light current	MIN:1.5 mA MAX:8 mA (Conditions IF=15mA, VCE=2V)	MIN:0.5 mA MAX:14 mA (Conditions IF=20mA, VCE=10V)
Detector Dark current	TYP:2 nA MAX: 200 nA (VCE=10V, 0 lx)	
Detector Collector–Emitter saturated voltage	MAX: 0.4 V (Conditions IF=30mA, IL=0.1mA)	TYP:0.15 V MAX: 0.4 V (Conditions IF=20mA, IL=0.1mA)
Detector Peak spectral sensitivity wavelength	TYP:850 nm (Conditions VCE=10V)	
Rising time	TYP:4 us MAX:20 us (Conditions VCC=5V, RL=100Ω, IL=5mA)	TYP:4 us (Conditions VCC=5V, RL=100Ω, IL=5mA)
Falling time	TYP:4 us MAX:20 us (Conditions VCC=5V, RL=100Ω, IL=1mA)	TYP:4 us (Conditions VCC=5V, RL=100Ω, IL=1mA)

Characteristics (Continued):

Item	Discontinued Model EE-SX1115	Suggested replacement Model EE-SX1042
Emitter Forward current	Maximum Ratings 50 mA	
Emitter Reverse voltage	Maximum Ratings 4 V	
Detector Collector–Emitter voltage	Maximum Ratings 30 V	
Detector Collector current	Maximum Ratings 20mA	
Detector Collector dissipation	Maximum Ratings 100 mW	
Operating temperature	-25°C ~ 85°C	
Storage temperature	-30°C ~ 100°C	
Emitter Forward voltage	TYP:1.2 V MAX:1.5 V (Conditions IF=30mA)	
Emitter Reverse current	TYP:0.01 μ A MAX:10 μ A (Conditions VR=4V)	
Emitter Peak emission wavelength	TYP: 940nm (Conditions IF=20mA)	
Detector Light current	MIN:0.55 mA MAX:14 mA (Conditions IF=20mA, VCE=10V)	MIN:0.5 mA MAX:10 mA (Conditions IF=20mA, VCE=10V)
Detector Dark current	TYP:2 nA MAX: 200 nA (VCE=10V, 0 lx)	
Detector Collector–Emitter saturated voltage	TYP:0.1 V MAX: 0.4 V (Conditions IF=20mA, IL=0.1mA)	
Detector Peak spectral sensitivity wavelength	TYP:850 nm (Conditions VCE=10V)	
Rising time	TYP:4 μ s (Conditions VCC=5V, RL=100 Ω , IL=5mA)	
Falling time	TYP:4 μ s (Conditions VCC=5V, RL=100 Ω , IL=5mA)	

Characteristics (Continued):

Item	Discontinued Model Model EE-SX□01	Suggested replacement Model EE-SX□98
Emitter Forward current	Maximum Ratings 50 mA	
Emitter Reverse voltage	Maximum Ratings 4 V	
Detector Power supply voltage	Maximum Ratings 16 V	
Detector Output voltage	Maximum Ratings 28 V	
Detector Output current	Maximum Ratings 20mA	
Detector Permissible output dissipation	Maximum Ratings 250 mW	
Operating temperature	-40°C ~ 75°C	
Storage temperature	-40°C ~ 85°C	
Emitter Forward voltage	TYP:1.2 V MAX:1.5 V (Conditions IF=20mA)	
Emitter Reverse current	TYP:0.01 uA MAX:10 uA (Conditions VR=4V)	
Emitter Peak emission wavelength	TYP: 940nm (Conditions IF=20mA)	
Detector Low-level output voltage	TYP:0.12 V MAX:0.4 V (Conditions VCC=4.5~16V, IOL=16mA, IF=0mA:EE-SX301 IF=8mA:EE-SX401)	TYP:0.12 V MAX:0.4 V (Conditions VCC=4.5~16V, IOL=16mA, IF=0mA:EE-SX398 IF=8mA:EE-SX498)
Detector High-level output voltage	MIN:15 V (Conditions VCC=16V, RL=1kΩ, IF=8mA:EE-SX301 IF=0mA:EE-SX401)	MIN:15 V (Conditions VCC=16V, RL=1kΩ, IF=8mA:EE-SX398 IF=0mA:EE-SX498)
Detector Current consumption	TYP:3.2 mA MAX:10 mA (Conditions VCC=16V)	
Detector Peak spectral sensitivity wavelength	TYP:870 nm (Conditions VCE=4.5~16V)	
LED current when output is OFF	TYP:3mA MAX:8mA (Conditions VCE=4.5~16V, EE-SX301)	TYP:2 mA MAX:5 mA (Conditions VCE=4.5~16V, EE-SX398)
LED current when output is ON	TYP:3mA MAX:8mA (Conditions VCE=4.5~16V, EE-SX401)	TYP:2 mA MAX:5 mA (Conditions VCE=4.5~16V, EE-SX498)
Hysteresis	TYP:15 % (Conditions VCE=4.5~16V)	
Response frequency	MIN:3 kHz (Conditions VCE=4.5~16V, IF=15mA, IOL=16mA)	
Response delay time	TYP:3 us (Conditions VCC=4.5~16V, IF=15mA, IOL=16mA) EE-SX301: raise time EE-SX401: falling time	TYP:3 us (Conditions VCC=5V, RL=100Ω, IL=5mA) EE-SX398: raise time EE-SX498: falling time
Response delay time	TYP:20 us (Conditions VCC=4.5~16V, IF=15mA, IOL=16mA) EE-SX301: falling time EE-SX401: raise time	TYP:20 us (Conditions VCC=4.5~16V, IF=15mA, IOL=16mA) EE-SX398: falling time EE-SX498: raise time

Characteristics (Continued):

Item	Discontinued Model EE-SY□13	Suggested replacement Model EE-SY□10
Emitter Forward current	Maximum Ratings 50 mA	
Emitter Reverse voltage	Maximum Ratings 4 V	
Detector Power supply voltage	Maximum Ratings 16 V	
Detector Output voltage	Maximum Ratings 28 V	
Detector Output current	Maximum Ratings 20mA	
Detector Permissible output dissipation	Maximum Ratings 250 mW	
Operating temperature	-40°C ~ 75°C	
Storage temperature	-40°C ~ 85°C	
Emitter Forward voltage	TYP:1.2 V MAX:1.5 V (Conditions IF=20mA)	
Emitter Reverse current	TYP:0.01 uA MAX:10 uA (Conditions VR=4V)	
Emitter Peak emission wavelength	TYP: 920nm (Conditions IF=20mA)	
Detector Low-level output voltage	TYP:0.12 V MAX:0.4 V (Conditions VCC=4.5~16V, IOL=16mA, without incident:EE-SY313, with incident:EE-SY413)	TYP:0.12 V MAX:0.4 V (Conditions VCC=4.5~16V, IOL=16mA, without incident:EE-SY313, with incident:EE-SY413)
Detector High-level output voltage	MIN:15 V (Conditions VCC=16V, RL=1kΩ, with incident:EE-SY313, without incident:EE-SY413)	MIN:15 V (Conditions VCC=16V, RL=1kΩ, with incident:EE-SY310, without incident:EE-SY410)
Detector Current consumption	TYP:3.2 mA MAX:10 mA (Conditions VCC=16V)	
Detector Peak spectral sensitivity wavelength	TYP:870 nm (Conditions VCE=4.5~16V)	
LED current when output is OFF	TYP:10mA MAX:20mA (Conditions VCE=4.5~16V, EE-SY313)	TYP:6 mA MAX:15 mA (Conditions VCE=4.5~16V, EE-SY310)
LED current when output is ON	TYP:10mA MAX:20mA (Conditions VCE=4.5~16V, EE-SY413)	TYP:6 mA MAX:15 mA (Conditions VCE=4.5~16V, EE-SY410)
Hysteresis	TYP:15 % (Conditions VCE=4.5~16V)	
Response frequency	MIN:50 pps (Conditions VCE=4.5~16V, IF=20mA, IOL=16mA)	MIN:50 pps (Conditions VCE=4.5~16V, IF=15mA, IOL=16mA)
Response delay time	TYP:3 us (Conditions VCC=4.5~16V, IF=15mA, IOL=16mA) EE-SY313: raise time EE-SY413: falling time	TYP:3 us (Conditions VCC=5V, RL=100Ω, IL=5mA) EE-SY310: raise time EE-SY410: falling time
Response delay time	TYP:20 us (Conditions VCC=4.5~16V, IF=15mA, IOL=16mA) EE-SY313: falling time EE-SY410: raise time	TYP:20 us (Conditions VCC=4.5~16V, IF=15mA, IOL=16mA) EE-SX310: falling time EE-SY413: raise time

Characteristics (Continued):

Item	Discontinued Model EE-SPY415	Suggested replacement Model B5W-LB2112-1
Power supply voltage	Maximum Ratings 7 V	Maximum Ratings 26.4 V
Output voltage	Maximum Ratings 16 V	Maximum Ratings 26.4 V
Output current	Maximum Ratings 30 mA	Maximum Ratings 60 mA
Operating temperature	-25°C ~ 85°C	-10°C ~ 60°C
Storage temperature	-30°C ~ 100°C	-25°C ~ 80°C
Current consumption	MAX: 25 mA (Conditions With and without incident)	MAX: 20 mA (Conditions With and without incident)
Low-level output voltage	MAX: 0.4 V (Conditions IOUT=20 mA , With incident)	MAX: 0.8 V (Conditions IOUT=50 mA) MAX: 0.32 V (Conditions IOUT=10 mA)
High-level output voltage	MIN: (VCC×0.9) (Conditions VOUT= VCC, RL=1kΩ , Without incident)	-
Response delay time	MAX:1 ms (Conditions VOUT= VCC, RL=1kΩ)	MAX:1 ms (Conditions VOUT= VCC)

* Sales teams should communicate this discontinuation with their OEM's and CEM's.
For further technical support and any questions, please communicate with Product Marketing.

Specifications in this product news are as of the issue date and are subject to change without notice.
Only main changes in specifications are described in this document. Please be sure to read the relevant catalogs, datasheets, product specifications, instructions, and manuals for precautions and necessary information when using products.
This PCN is intended for use in the Americas
Last time buy dates are subject to change based on availability