

**NO: PMS-002**
**DATE: May 2009**
**PRODUCT: Non-Amplified PMS EE-SY124 and EE-SY125**
**TYPE: Product Discontinuation**

## EE-SY124 and EE-SY125 Non-Amplified Photomicrosensors DISCONTINUED

Due to the discontinuation of sub-components, Omron is discontinuing the below parts.

<b>Part No.</b>	<b>Discontinuation Date</b>	<b>Last Order Date</b>	<b>Conditional Replacements</b>
<b>EE-SY124</b>	March 30, 2010	<b>February 1, 2010</b>	EE-SY171, EE-SY199
<b>EE-SY125</b>	March 30, 2010	<b>February 1, 2010</b>	EE-SY199

### PLEASE NOTIFY YOUR CUSTOMERS IMMEDIATELY!

#### Replacement Information:

Neither listed "Conditional Replacement" is a direct replacement. Please notify customers ASAP so that they can start planning for and testing replacement options.

The EE-SY171 is available now. It is a Non-stock/NCNR type part, but we currently have over 3000 pieces in stock at the Illinois warehouse. Here is a link to the datasheet:

[http://www.components.omron.com/components/web/pdf/lib.nsf/0/5B71DC853968AD5485257201007DD603/\\$file/D21EESY1710305.pdf](http://www.components.omron.com/components/web/pdf/lib.nsf/0/5B71DC853968AD5485257201007DD603/$file/D21EESY1710305.pdf)

The EE-SY199 is scheduled to be released in January 2010, however, pre-release samples may be available from the factory before then. Please send your requests to the Product Manager.

#### EE-SY124 Replacement Comparison:

Model	Color of body	Dimension	Wiring Connection	Mounting dimension	Characteristics	Operation rating	Operation method
EE-SY171	◎	×	×	×	○	○	○
EE-SY199	◎	×	×	×	○	○	○

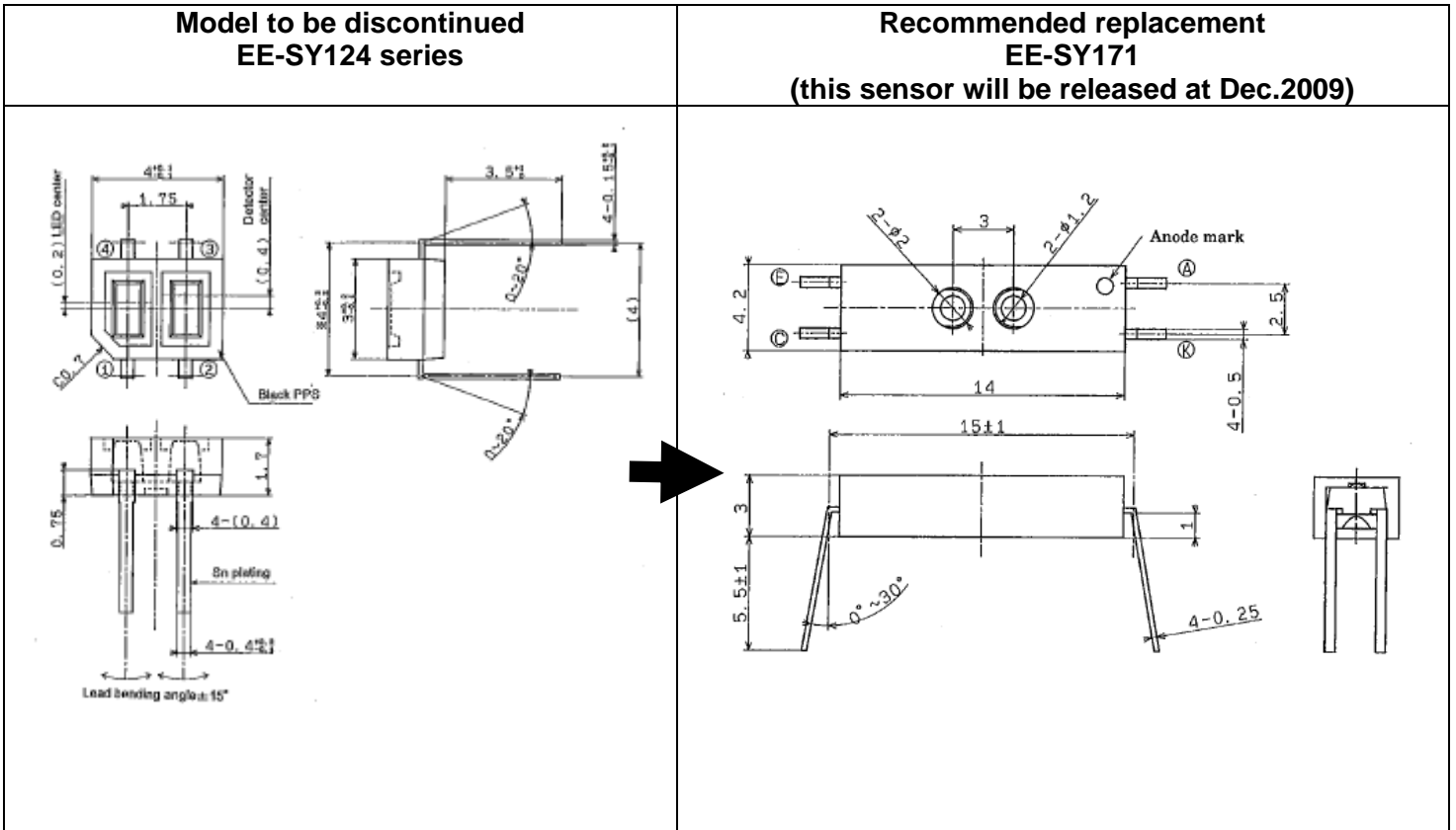
◎ Completely compatible

○ Small change / High equivalent

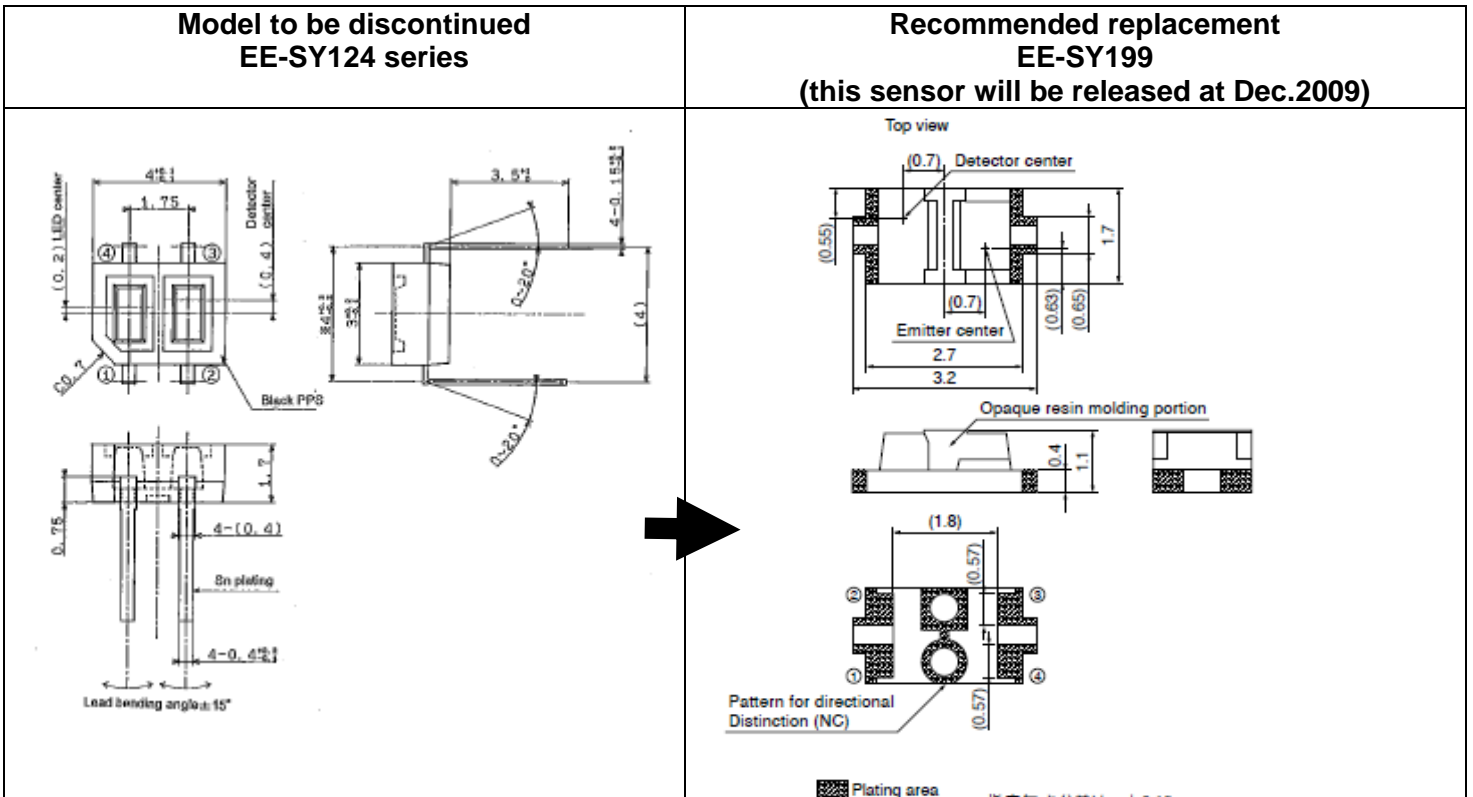
× Large change

	<b>EE-SY124 series</b>	<b>EE-SY171</b>	<b>EE-SY199</b> (this sensor will be released at Dec.2009)
Packaging	50pcs.in each stick and Max.80 sticks per 1 packaging box	25pcs. in each bag and 10bag per 1 packaging box	2000pcs. per 1 reel and Aluminum dampproofing packing
Minimum order Qty.	2000pcs.	250pcs.	2000pcs.

< EE-SY124 series and EE-SY171 >

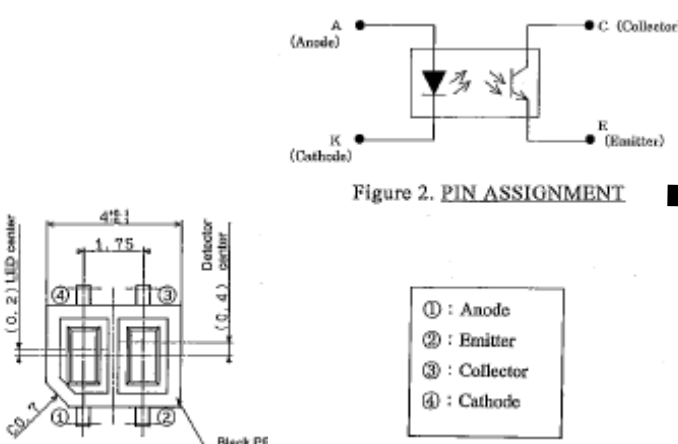
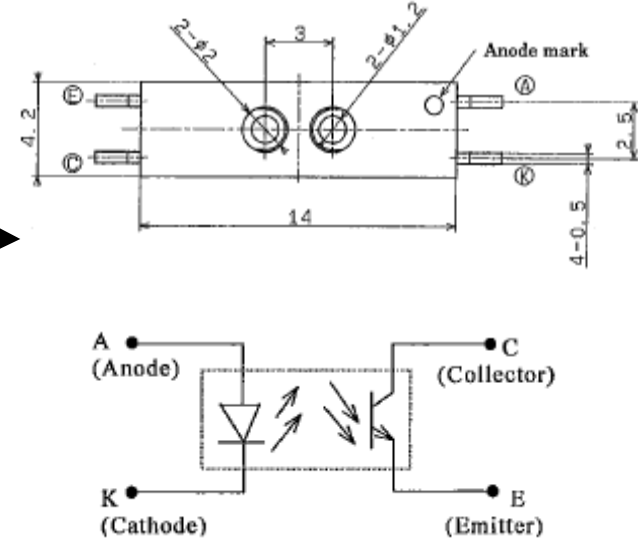


< EE-SY124 series and EE-SY199 >

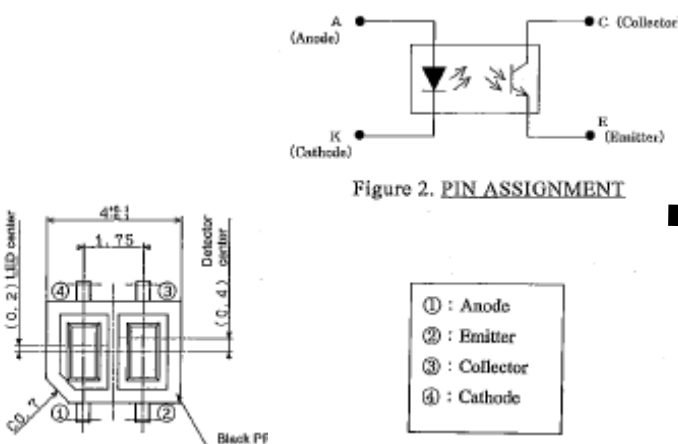
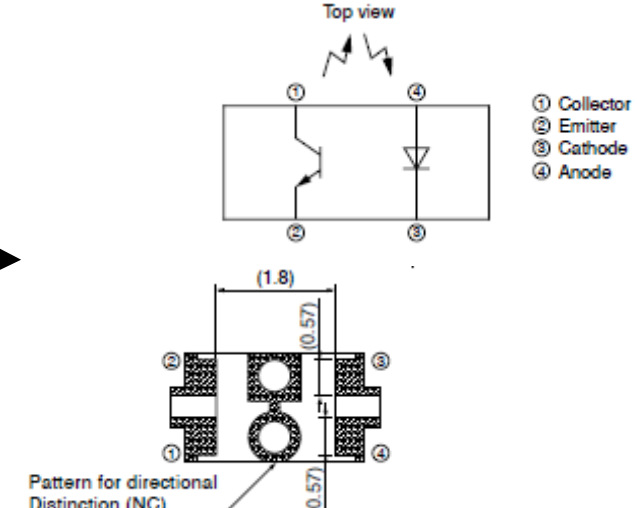


Terminal dimension

< EE-SY124 series and EE-SY171 >

<p>Model to be discontinued EE-SY124 series</p>	<p>Recommended replacement EE-SY171</p>
 <p>Figure 2. PIN ASSIGNMENT</p>	

< EE-SY124 series and EE-SY199 >

<p>Model to be discontinued EE-SY124 series</p>	<p>Recommended replacement EE-SY199 (this sensor will be released at Dec.2009)</p>
 <p>Figure 2. PIN ASSIGNMENT</p>	

< EE-SY124 series and EE-SY171 >

Item	Model to be discontinued EE-SY124 series	Recommended replacement EE-SY171	Recommended replacement EE-SY199 (this sensor will be released at Dec.2009)
Forward current	5 0 mA	5 0 mA	5 0 mA
Reverse voltage	4 V	4 V	6 V
Collector-Emitter voltage	3 0 V	3 0 V	3 5 V
Emitter-Collector voltage	5 V	—	6 V
Collector current	2 0 mA	2 0 mA	2 0 mA
Collector dissipation	7 5 mW	1 0 0 mW	7 5 mW
Operating temperature	- 2 5 to + 8 5 °C	- 4 0 to + 8 5 °C	- 2 5 to + 8 5 °C
Storage temperature	- 4 0 to + 1 0 0 °C	- 4 0 to + 8 5 °C	- 4 0 to + 8 5 °C
Soldering temperature	2 6 0 °C max. less than 5 sec.	2 6 0 °C max. less than 1 0 sec.	2 6 0 °C max. less than 3 sec. 2 4 0 °C max. less than 1 0 sec.

< EE-SY124 series and EE-SY171 >

Item	Model to be discontinued EE-SY124 series			Recommended replacement EE-SY171		
	Value			Value		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
Forward voltage	—	1.2V	1.4V	—	1.2V	1.4V
	Condition : IF=20mA			Condition : IF=20mA		
Reverse current	—	0.01µA	10µA	—	—	10µA
	Condition : VR=4V			Condition : VR=6V		
Peak emission wavelength	—	900nm	—	—	950nm	—
	Condition : IF=4mA			Condition : IF=4mA		
Light current	50µA	—	300µA	40µA	85µA	130µA
	Condition : IF=4mA, VCE=2V Sensing object: Aluminum-deposited surface Sensing distance:1mm			Condition : IF=20mA, VCE=10V Sensing object: White paper with a 90% reflection ratio Sensing distance:3.5mm		
Dark current	—	2nA	200nA	—	2nA	200nA
	Condition : VCE=10V, 0lx			Condition : VCE=10V, 0lx		
Collector-Emitter saturated voltage	—	—	—	—	—	—
	—			—		
Rising time t <sub>r</sub>	—	35µs	—	—	20µs	100µs
	Condition : VCC=2V, RL=1kΩ, IF=100µA			Condition : VCC=2V, RL=1kΩ, IF=100µA		
Falling time t <sub>f</sub>	—	25µs	—	—	20µs	100µs
	Condition : VCC=2V, RL=1kΩ, IF=100µA			Condition : VCC=2V, RL=1kΩ, IF=100µA		

< EE-SY124 series and EE-SY199 >

Item	Model to be discontinued EE-SY124 series			Recommended replacement EE-SY199 (this sensor will be released at Dec.2009)		
	Value			Value		
	MIN.	MIN.	MIN.	MIN.	TYP.	MAX.
<b>Forward voltage</b>	—	1.2V	1.4V	—	1.2V	1.4V
	Condition : IF=20mA			Condition : IF=20mA		
<b>Reverse current</b>	—	0.01μA	10μA	—	0.01μA	10μA
	Condition : VR=4V			Condition : VR=6V		
<b>Peak emission wavelength</b>	—	950nm	—	—	950nm	—
	Condition : IF=4mA			Condition : IF=4mA		
<b>Light current</b>	50μA	—	300μA	40μA	85μA	130μA
	Condition : IF=4mA, VCE=2V Sensing object: Aluminum-deposited surface Sensing distance:1mm			Condition : IF=4mA, VCE=2V Sensing object: Aluminum-deposited surface Sensing distance:1mm		
<b>Dark current</b>	—	2nA	200nA	—	1nA	100nA
	Condition : VCE=10V, 0lx			Condition : VCE=20V, 0lx		
<b>Collector-Emitter saturated voltage</b>	—	—	—	—	—	—
	—			—		
<b>Rising time tr</b>	—	35μs	—	—	20μs	100μs
	Condition : VCC=2V, RL=1kΩ, IF=100μA			Condition : VCC=2V, RL=1kΩ, IF=100μA		
<b>Falling time tf</b>	—	25μs	—	—	20μs	100μs
	Condition : VCC=2V, RL=1kΩ, IF=100μA			Condition : VCC=2V, RL=1kΩ, IF=100μA		

**EE-SY125 Replacement Comparison:**

Model	Color of body	Dimension	Wiring Connection	Mounting dimension	Characteristics	Operation rating	Operation method
EE-SY199	◎	×	×	×	○	○	○

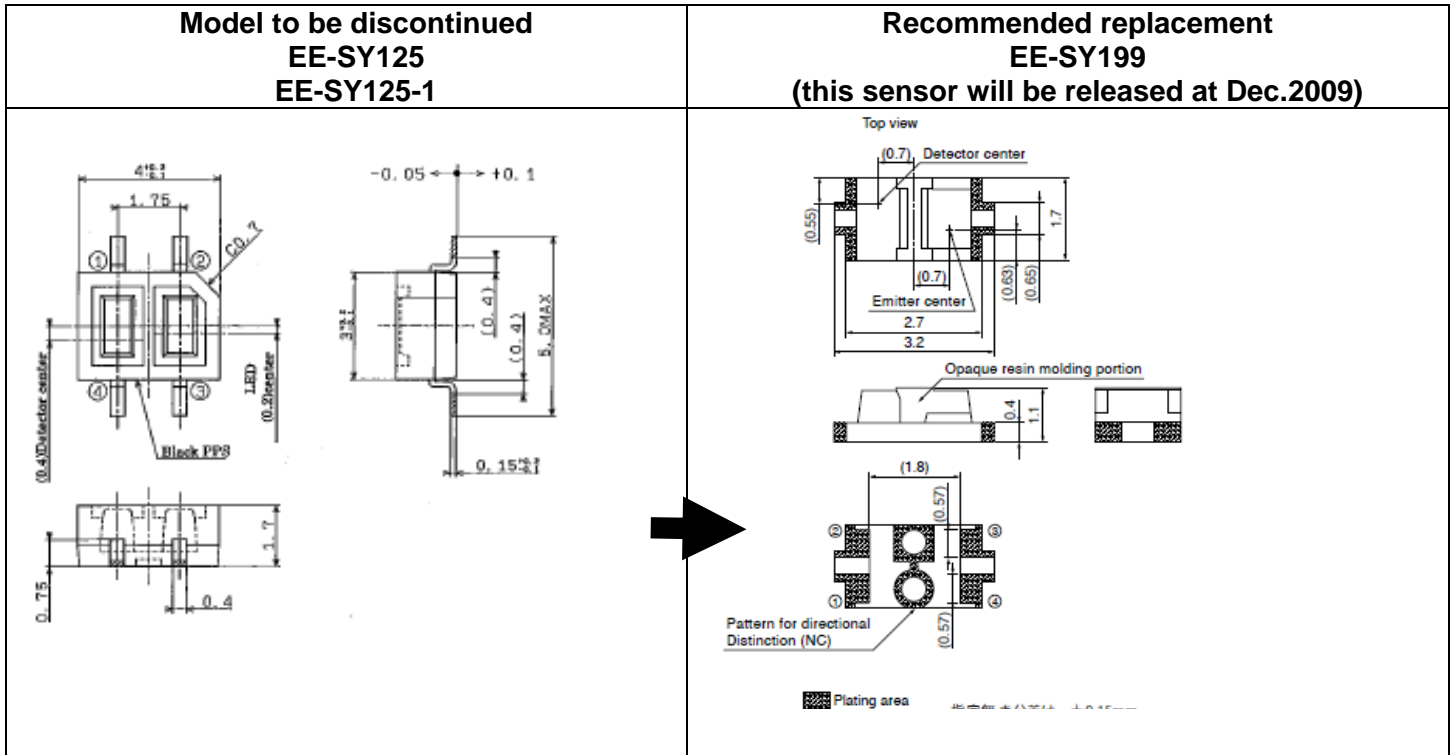
◎ Completely compatible

○ Small change / High equivalent

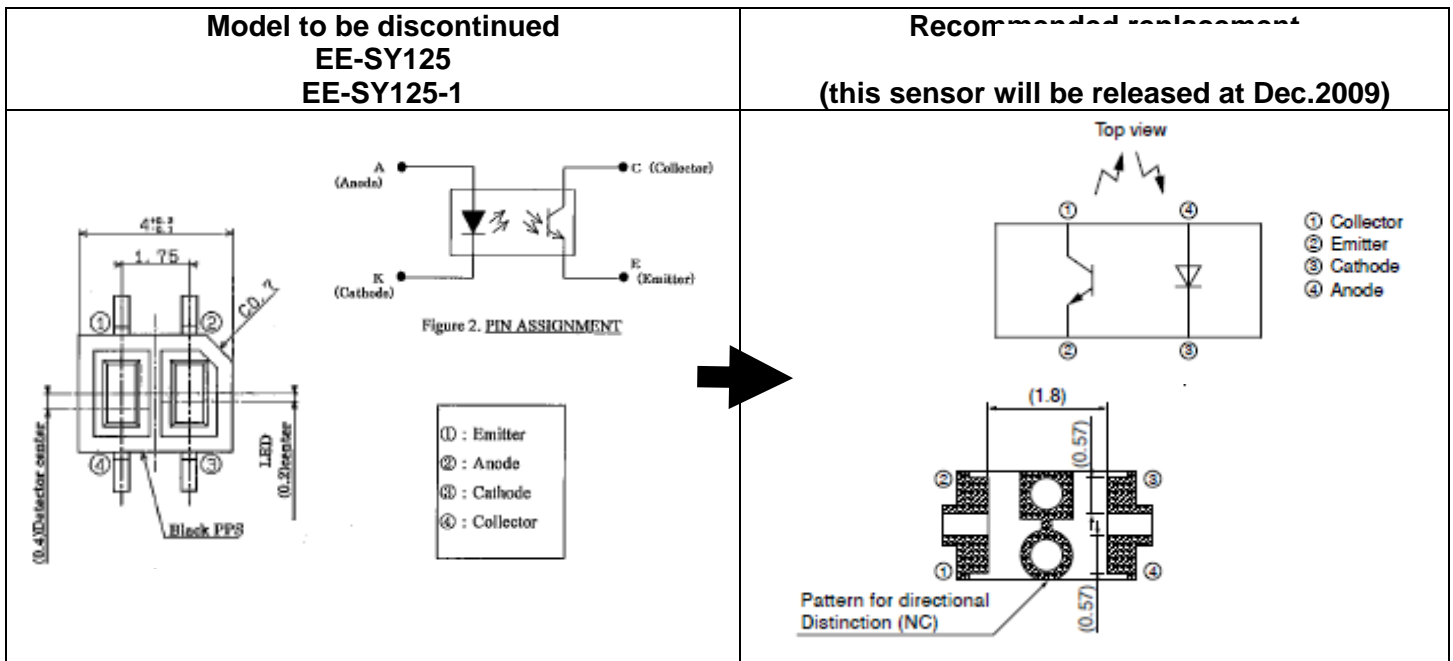
× Large change

	EE-SY125	EE-SY125-1	EE-SY199 (this sensor will be released at Dec.2009)
Packaging	50pcs.in each stick and 40 sticks per 1 Aluminum dampproofing packing	1000pcs. per 1 reel and Aluminum dampproofing packing	2000pcs. per 1 reel and Aluminum dampproofing packing
Minimum order Qty.	2000pcs.	1000pcs.	2000pcs.

< EE-SY125/EE-SY125-1 and EE-SY199 >



< EE-SY125/EE-SY125-1 and EE-SY199 >



< EE-SY125/EE-SY125-1 and EE-SY199 >

Item	Model to be discontinued EE-SY125/EE-SY125-1	Recommended replacement EE-SY199 (this sensor will be released at Dec.2009)
Forward current	50 mA	50 mA
Reverse voltage	4 V	6 V
Collector-Emitter voltage	3.0 V	3.5 V
Emitter-Collector voltage	5 V	6 V
Collector current	20 mA	20 mA
Collector dissipation	75 mA	75 mA
Operating temperature	-25 to +85 °C	-25 to +85 °C
Storage temperature	-40 to +100 °C	-40 to +100 °C
Soldering temperature	260°C max. less than 3 sec. 240°C max. less than 10 sec.	260°C max. less than 5 sec. 240°C max. less than 10 sec.

**Characteristics (Ta=25°C)**

< EE-SY125/EE-SY125-1 and EE-SY199 >

Item	Model to be discontinued EE-SY125/EE-SY125-1			Recommended replacement EE-SY199 (this sensor will be released at Dec.2009)		
	Value			Value		
	MIN.	MIN.	MIN.	MIN.	TYP.	MAX.
Forward voltage	—	1.2V	1.4V	—	1.2V	1.4V
	Condition : IF=20mA			Condition : IF=20mA		
Reverse current	—	0.01µA	10µA	—	—	10µA
	Condition : VR=4V			Condition : VR=6V		
Peak emission wavelength	—	950nm	—	—	950nm	—
	Condition : IF=4mA			Condition : IF=4mA		
Light current	50µA	—	300µA	40µA	85µA	130µA
	Condition : IF=4mA, VCE=2V Sensing object: Aluminum-deposited surface Sensing distance:1mm			Condition : IF=4mA, VCE=2V Sensing object: Aluminum-deposited surface Sensing distance:1mm		
Dark current	—	2nA	200nA	—	1nA	100nA
	Condition : VCE=10V, 0lx			Condition : VCE=20V, 0lx		
Collector-Emitter saturated voltage	—	—	—	—	—	—
Rising time tr	—	35µs	—	—	20µs	100µs
	Condition : VCC=2V, RL=1kΩ, IF=100µA			Condition : VCC=2V, RL=1kΩ, IF=100µA		
Falling time tf	—	25µs	—	—	20µs	100µs
	Condition : VCC=2V, RL=1kΩ, IF=100µA			Condition : VCC=2V, RL=1kΩ, IF=100µA		