

To our customers,

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## Old Company Name in Catalogs and Other Documents

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On April 1<sup>st</sup>, 2010, NEC Electronics Corporation merged with Renesas Technology Corporation, and Renesas Electronics Corporation took over all the business of both companies. Therefore, although the old company name remains in this document, it is a valid Renesas Electronics document. We appreciate your understanding.

Renesas Electronics website: <http://www.renesas.com>

April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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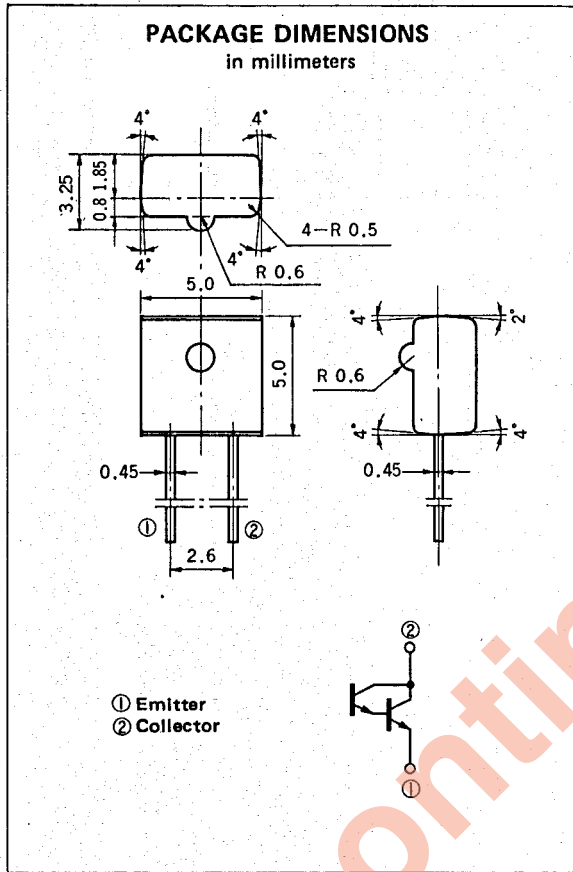
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LIGHT EMITTING DIODE  
PH107

DARLINGTON PHOTO TRANSISTOR

—NEPOC SERIES—



The PH107 is a darlington photo transistor in a plastic molded package, and very suitable for a detector of a photo interrupter.

**ABSOLUTE MAXIMUM RATINGS** ( $T_a = 25\text{ }^\circ\text{C}$ )

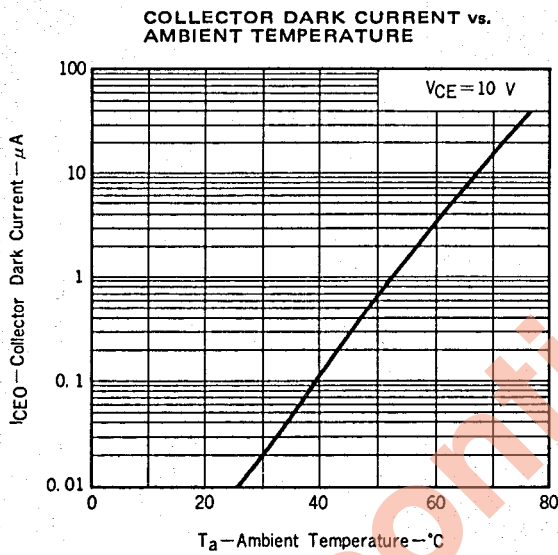
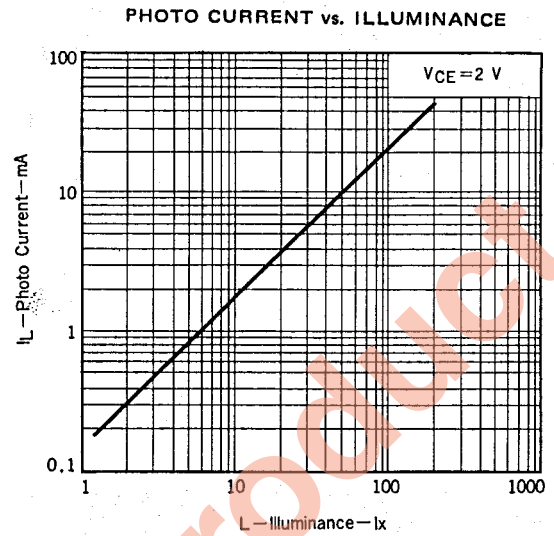
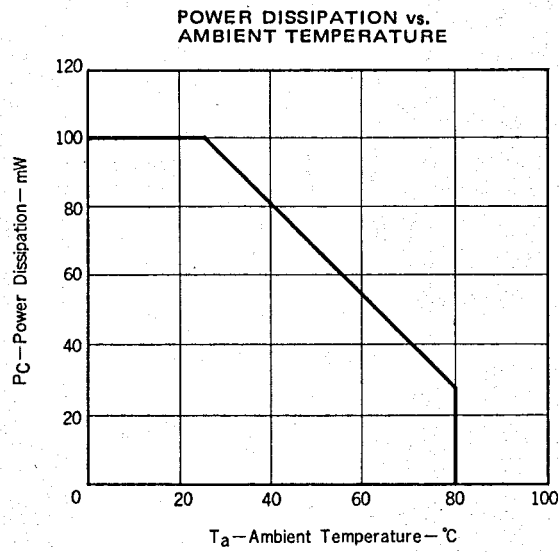
Collector to Emitter Voltage	$V_{CEO}$	30	V
Collector Current	$I_C$	50	mA
Power Dissipation	$P_D$	100	mW
Junction Temperature	$T_j$	100	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-40 to +100	$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS** ( $T_a = 25\text{ }^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector to Emitter Dark Current	$I_{CEO}$		10	400	nA	$V_{CE} = 10\text{ V}, L = 0\text{ lx}$
Collector Saturation Voltage	$V_{CE(sat)}$		0.7	1.5	V	$I_C = 10\text{ mA}, L = 1\text{ 000 lx}^*$
Photo Current	$I_L$	10	20		mA	$V_{CE} = 2\text{ V}, L = 100\text{ lx}^*$

\*Measured with a tungsten filament lamp operated at a color temperature of 2 854 K.

TYPICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )



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