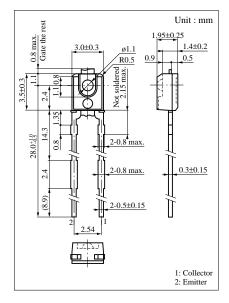
# PNZ263L (PN263L-(NC))

### **Darlington Phototransistor**

For optical control systems

- Features
- Darlington output, high sensitivity
- Small size, thin side-view type package
- Adoption of visible light cutoff resin



Absolute Maximum Ra	atings (Ta = $25^{\circ}$ C)
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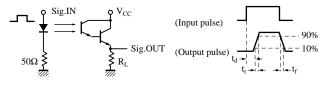
Parameter	Symbol	Ratings	Unit	
Collector to emitter voltage	V <sub>CEO</sub>	20	V	
Emitter to collector voltage	V <sub>ECO</sub>	5	V	
Collector current	I <sub>C</sub>	30	mA	
Collector power dissipation	P <sub>C</sub>	100	mW	
Operating ambient temperature	T <sub>opr</sub>	-25 to +80	°C	
Storage temperature	T <sub>stg</sub>	-30 to +100	°C	

#### Electro-Optical Characteristics ( $Ta = 25^{\circ}C$ )

Parameter	Symbol	Conditions	min	typ	max	Unit
Dark current	I <sub>CEO</sub>	$V_{CE} = 10V$		0.1	0.5	μΑ
Sensitivity to infrared emitters	S <sub>IR</sub> <sup>*1</sup>	$V_{CE} = 10V, H = 3.75 \ \mu W/cm^2$	60	200		μA
Peak sensitivity wavelength	$\lambda_{\rm P}$	$V_{CE} = 10V$		850		nm
Acceptance half angle	θ	Measured from the optical axis to the half power point		25		deg.
Response time	$t_{\rm r}, t_{\rm f}^{*2}$	$V_{CC} = 10V$ , $I_C = 1mA$ , $R_L = 100\Omega$		150		μs
Collector saturation voltage	V <sub>CE(sat)</sub>	$I_C = 100 \mu A$ , $H = 3.75 \ \mu W/cm^2$		0.7	1.5	V

<sup>\*1</sup> Measurements were made using infrared light ( $\lambda = 940$  nm) as a light source.

\*2 Switching time measuring circuit

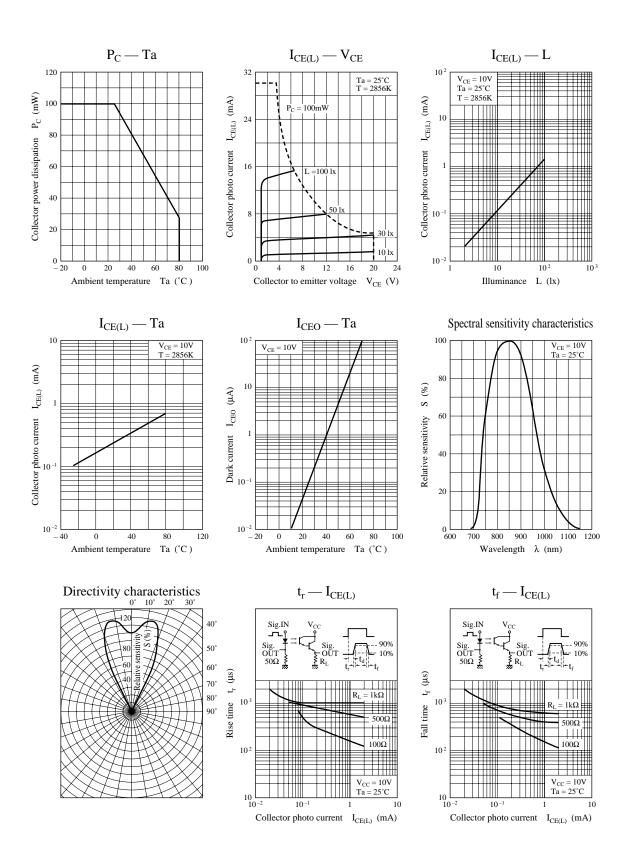


 $t_d\colon \text{ Delay time}$ 

- $t_{\rm r}\,:\,$  Rise time (Time required for the collector photo current to increase from 10% to 90% of its final value)
- $t_{\rm f}\colon$  Fall time (Time required for the collector photo current to decrease from 90% to 10% of its initial value)

Note) The part number in the parenthesis shows conventional part number.





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