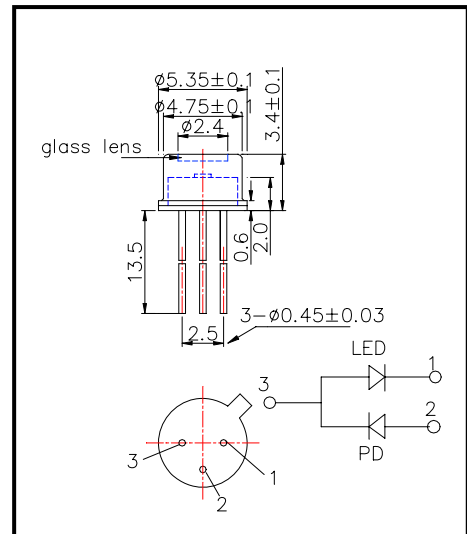


L780/PD010-40D52 High Power LED with PD Monitor

L780/PD010-40D52 consists of a GaAlAs LED 780nm and a Si-PD mounted on TO-18 stem hermetically sealed with a glass flat can, and is designed to monitor reflected light through detector for controlling its own output power

◆ Outer dimension (Unit: mm)



◆ Specifications

- 1) Product Name LED Lamp with PD Monitor
- 2) Type No. L780/PD010-40D52
- 3) Chip
 - (1) Chip material GaAlAs, Si (PIN)
 - (2) Peak wavelength 780nm
- 4) Package
 - (1) Stem TO-18
 - (2) Lens Φ 5 2.4 Flat Glass
 - (3) Can Metal Can (Gold Plate)

◆ Absolute Maximum Ratings $T_a=25^\circ\text{C}$

Device	Item	Symbol	Maximum Rated	Unit
LED	Power Dissipation	PD	200	mW
LED	Forward Current	IF	100	mA
LED	Pulse Forward Current	IFP	500	mA
LED	Reverse Voltage	VR	5	V
PD	Reverse Voltage	VR	100	V
	Operating Temperature	TOPR	-30 ~ +85	$^\circ\text{C}$
	Storage Temperature	TSTG	-30 ~ +100	$^\circ\text{C}$
	Soldering Temperature	TSOL	260	$^\circ\text{C}$

‡ Pulse Forward Current condition: duty=1% and $t_w=10\mu\text{s}$.

‡ Soldering condition: Soldering condition must be completed within 3 seconds at 260°C

◆ Electro-Optical Characteristics $T_a=25^\circ\text{C}$

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=50mA		1.70	2.00	V
Reverse Current	IR	VR=5V			10	μA
Total Radiated Power	PO	IF=50mA	3.0	6.0		mW
Radiant Intensity	IE	IF=50mA	2.5	5.0		MW/sr
Peak Wavelength	λ_P	IF=50mA	765	780	795	nm
Half Width	$\Delta\lambda$	IF=50mA		35		nm
Viewing Half Angle	$\theta_{1/2}$	IF=50mA		± 55		deg.
Rise Time	tr	IF=50mA		60		Ns
Fall Time	tf	IF=50mA		40		Ns
Output Current	IL	VR=0V	250	500		μA
Dark Current	ID	VR=10V			10	nA

‡ Total Radiated Power is measured by Photodyne #500.

‡ Radiant Intensity is measured by Tektronix J-6512