

Preliminary

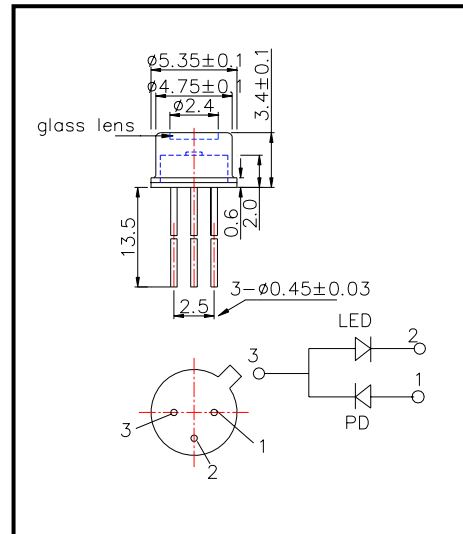
# L890/PD010-40D52 PD monitoring high power LED

L890/PD010-40D52 consists of a GaAlAs LED 880nm 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

◆ Specifications

- 1) Product Name LED Lamp with PD Monitor
- 2) Type No. L890/PD010-40D52
- 3) Chip
  - (1) Chip material GaAlAs and Si(PIN)
  - (2) Peak wavelength 880nm
- 4) Package
  - (1) Stem  $\Phi$ 5mm TO-18
  - (2) Lens Metal Can (Gold Plate)

◆ Outer dimension (Unit: mm)



◆ Absolute Maximum Ratings [Ta=25°C]

Device	Item	Symbol	Maximum Rated	Unit
LED	Power Dissipation	P <sub>D</sub>	150	mW
LED	Forward Current	I <sub>F</sub>	100	mA
LED	Pulse Forward Current	I <sub>FP</sub>	500	A
LED	Reverse Voltage	V <sub>R</sub>	5	V
PD	Reverse Voltage	V <sub>R</sub>	100	V
	Operating Temperature	T <sub>OPR</sub>	-20 ~ +85	°C
	Storage Temperature	T <sub>STG</sub>	-30 ~ +100	°C
	Soldering Temperature	T <sub>SOL</sub>	260	°C

‡Soldering condition: Soldering condition must be completed within 3 seconds at 250°C

◆ Electro-Optical Characteristics [Ta=25°C]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =50mA		1.45	1.70	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V			10	uA
Total Radiated Power	P <sub>O</sub>	I <sub>F</sub> =50mA	2.5	5.0		mW
Radiant Intensity	I <sub>E</sub>	I <sub>F</sub> =50mA	2.0	4.0		mW/sr
Peak Wavelength	$\lambda_P$	I <sub>F</sub> =50mA	865	880	895	nm
Half Width	$\Delta\lambda$	I <sub>F</sub> =50mA		50		nm
Viewing Half Angle	$\theta_{1/2}$	I <sub>F</sub> =50mA		±40		deg.
Rise Time	t <sub>r</sub>	I <sub>F</sub> =50mA		800		ns
Fall Time	t <sub>f</sub>	I <sub>F</sub> =50mA		400		ns
Output Current	I <sub>L</sub>	V <sub>R</sub> =0V	130	260		uA
Dark Current	I <sub>D</sub>	V <sub>R</sub> =10V			10	nA

‡Total Radiated Power is measured by Photodyne #500