



EPD-525-0-2.5

- Selective Photodiode
- Sensitivity Range: 410-580 nm
- Active Area: 5.8 mm²
- Package: TO-39 with cap, isolated pins

Description

EPD-525-0-2.5 is a selective photodiode based on GaP with an active area of 5.8 mm², mounted in hermetically sealed TO-39 package with isolated pins.

The PD is specified with a sensitivity range of 410 – 580 nm, and a peak at 525 nm.

Maximum Ratings (T_{CASE}=25°C)

Parameter	Symbol	Values		Unit
		Min.	Max.	
Temperature Coefficient of I _D *	T _{C(I_{PH})}		4.7	%/K
Operating Temperature	T _{CASE}	- 40	+ 125	°C
Storage Temperature	T _{STG}	- 40	+ 125	°C

* T = -40 ... +120°C

Optical and Electrical Characteristics (T_{CASE}=25°C)

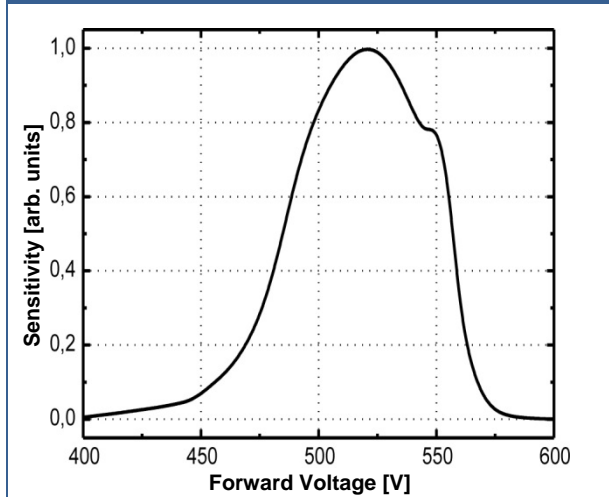
Parameter	Symbol	Conditions	Values			Unit
			Min.	Typ.	Max.	
Active Area	A			5.8		mm ²
Peak Sensitivity Wavelength	λ _P	V _R =0V	510	525	535	nm
Dark Current	I _D	V _R =5V		50	300	pA
Responsivity at λ _P	S _λ	V _R =0V		0.08		A/W
Spectral Range at 50%, lower limit	Δλ _{0.5}	V _R =0V	470	480	500	nm
Spectral Range at 50%, upper limit	Δλ _{0.5}	V _R =0V	550	560	570	nm
Sensitivity Range at 1% *	λ _{min} , λ _{max}	V _R =0V	410		580	nm
Spectral Bandwidth at 50%	Δλ _{0.5}	V _R =0V		80		nm
Shunt Resistance	R _{TH}	V _R =10mV		50		GΩ
Noise Equivalent Power	NEP	λ=525nm		3x10 ⁻¹³		W/√Hz
Junction Capacitance	C _J	V _R =0V		350		pF
Switching Time (R _L = 50Ω)	t _r , t _f	V _R =1V		50		ns

* for information only

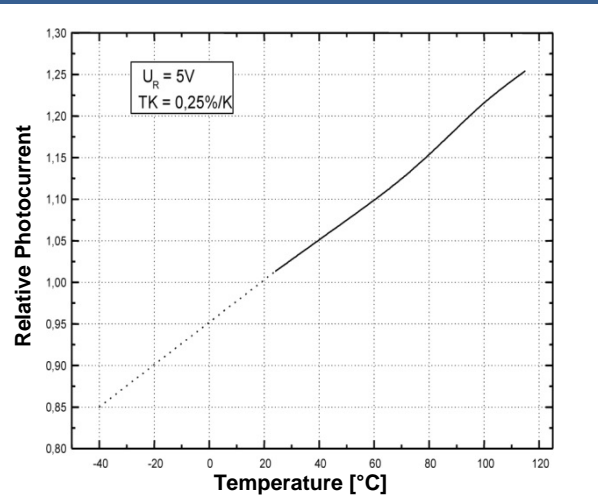


Typical Performance Curves

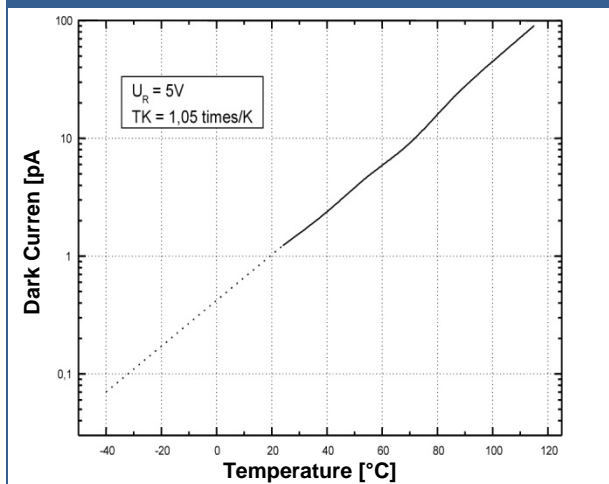
Optical Responsivity (typical)



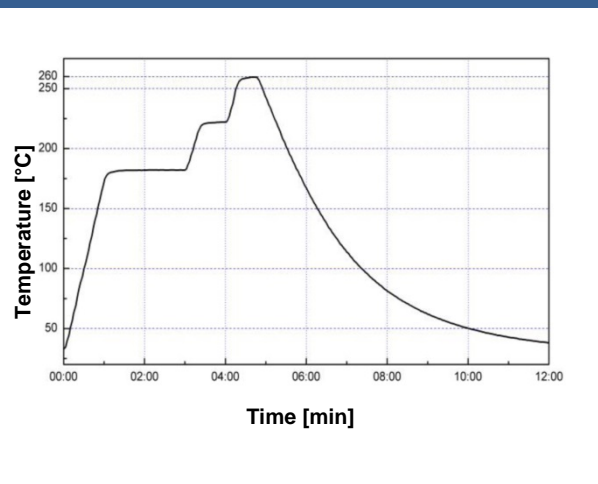
Relative Photocurrent vs. Temperature



Dark Current vs. Temperature



Allowed Soldering Profile

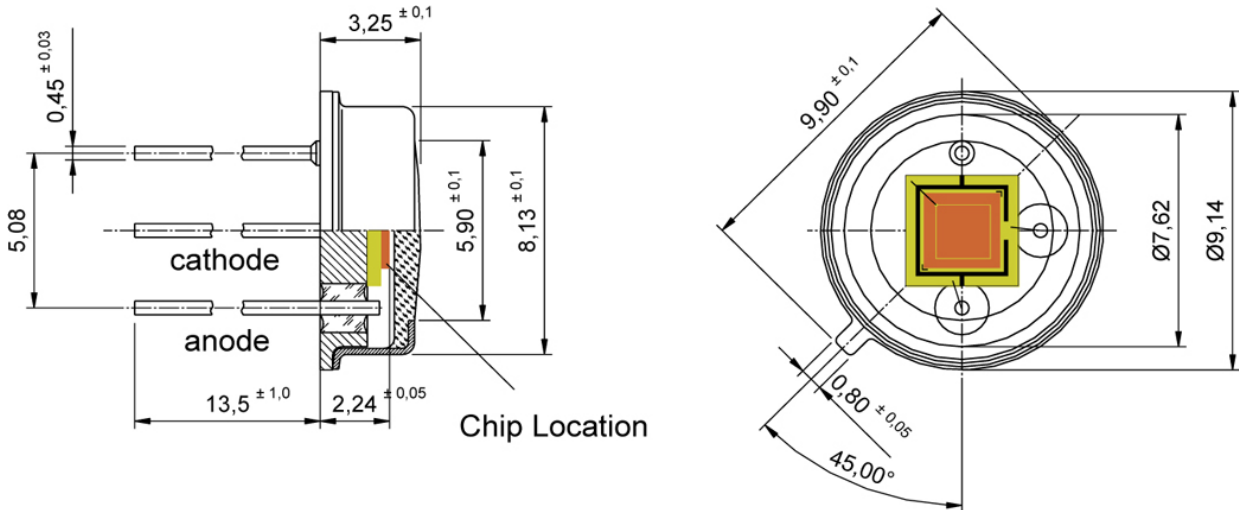




Outline Dimensions

EPD-525-0-2.5

TO-39



All Dimensions in mm

Precautions

Operation:

- Check your connection circuits before turning on the PD.
- Mind the PD polarity..
- DO NOT connect the PD to the multimeter.

Soldering:

- Do avoid overheating of the PD
- Do avoid electrostatic discharge (ESD)
- Do avoid mechanical stress, shock, and vibration
- Do only use non-corrosive flux
- Do not apply current to the PD until it has cooled down to room temperature after soldering

Static Electricity:

PDs are **sensitive to electrostatic discharge (ESD)**. Precautions against ESD must be taken when handling or operating these PDs. Surge voltage or electrostatic discharge can result in complete failure of the device.

