



MEAS DETECTOR ASSEMBLY EPM-4001

SpO₂ Optical Sensor Component

- ◆ Silicon Photodiode
- ◆ Lead Frame Construction
- ◆ Pulse Oximetry Component

Low oxygen level can put a strain on cell functioning including the heart and brain. This is critical in acute medical situations like post-op recovery. TE Connectivity's SpO₂ optical components provide leading accuracy in oxygen level detection.

With more than 27 years of proven reliability and expertise, TE Connectivity (TE) has designed SpO₂ sensors with best-in-class flexibility to accommodate multiple wavelength options.

Our ability to provide both components and complete sensor packages makes us a leading choice for pulse oximetry applications that require high degrees of precision, durability and performance.

The EPM-4001 detector assembly uses a silicon planar diffused photodiode specially designed for medical applications. It features high efficiency and fast response. The EPM-4001 detector assembly is spectrally matched to emitter assemblies ELM-4001, ELM-4002 and ELM-4003.

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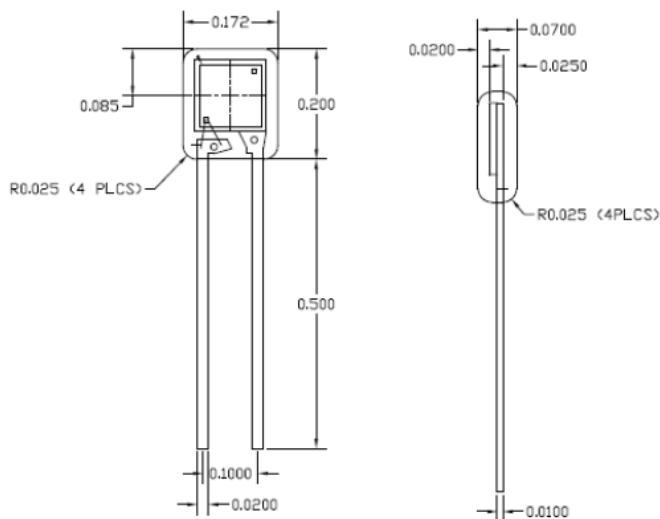
Features

- ◆ Lead Frame Construction
- ◆ Fast Response
- ◆ Matched to 660nm Emitters
- ◆ High Efficiency
- ◆ Clear Epoxy Lens
- ◆ Compact Package
- ◆ Active Area: 8.07mm²

Applications

- ◆ Pulse Oximetry
- ◆ SpO₂ Finger/Ear Reusable Probes
- ◆ SpO₂ Disposable Strip or Butterfly Probes

Dimensions (ELM-4001)

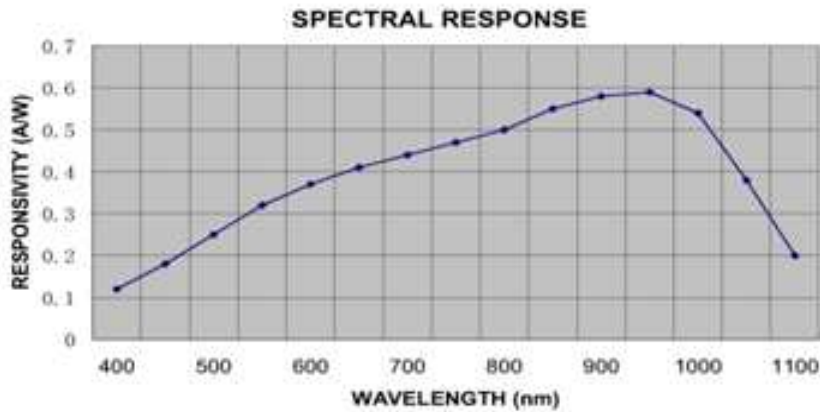


Specifications and Ratings

Parameter @ 25°C	Symbol	Conditions	Min.	Typ.	Max.	Absolute	Unit
Power Dissipation	P_d					150	mW
Operating Temperature	T_{opr}					-25~+80	°C
Storage Temperature	T_{stg}					-40~+80	°C
Soldering Temperature	T_{sol}					260	°C
Forward Voltage	V_f	$I_f=100\mu A$			0.70		V
Reverse Voltage	V_r	$I_r=100\mu A$	50				V
Shunt Resistance	R_{sh}	$\pm 10mV$	40				MΩ
Capacitance	C_t	$V_R=5V, f=1MHz$		19			pF
Spectral Sensitivity	λ		400		1080		nm
Rise Time/Fall Time	T_r/T_f	$V_f=0V, R_l=50\Omega$			350		nSec
Responsivity	R	$\lambda=540nm$	0.28				A / W
Temp. Coef. Of Isc	β_t				0.18		%

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Ordering Information

Description	Model	Part Number
Detector Assembly; Lead Frame; 8.07 mm ²	EPM-4001	20-0696

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