



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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MEAS EMITTER ASSEMBLY ELM-4000 SERIES

SpO₂ optical sensor component

- ◆ Dual Drive
- ◆ Lead Frame Construction
- ◆ Pulse Oximetry Component
- ◆ Clear Epoxy

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 (TE) 's SpO₂ optical components provide leading accuracy in oxygen level detection.

With more than 27 years of proven reliability and expertise, 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 ELM-4000 series emitter assemblies are specially designed for medical applications where selection of peak wavelength is a key requirement. Emission source material is GaAlAs in conjunction with GaAlP complete with clear epoxy lens.

MEAS EMITTER ASSEMBLY ELM-4000 SERIES

SpO₂ Optical Sensor Component

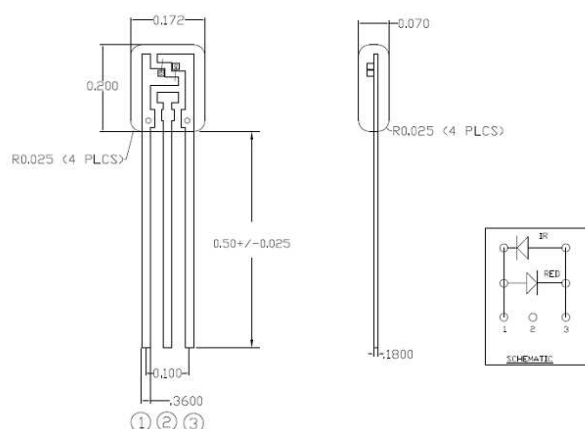
Features

- ♦ 660 nm ± 3 nm Peak Wavelength Red LED
- ♦ Three IR Wavelength Choices
- ♦ Dual Drive

Applications

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

Dimensions (ELM-4001)



RED 660nm

Parameter @ 25°C	Symbol	Conditions	Min.	Typ.	Max.	Absolute	Unit
Forward Voltage	V_f	$I_f=20\text{mA}$		1.85	2.30		V
Reverse Voltage	V_{B_r}	$I_{B_r}=10\mu\text{A}$	3.0				V
Reverse Current	I_r	$V_r=3\text{V}$			100		μA
Radiated Power	P_o	$I_f=20\text{mA}$		1			mW
Peak Wavelength	λ_p	$I_f=20\text{mA}$	657	660	663		nm

INFRARED 880nm (ELM-4001)

Parameter @ 25°C	Symbol	Conditions	Min.	Typ.	Max.	Absolute	Unit
Forward Voltage	V_f	$I_f=20\text{mA}$			1.50		V
Reverse Voltage	V_{B_r}	$I_{B_r}=10\mu\text{A}$	3.0				V
Peak Wavelength	λ_p	$I_f=20\text{mA}$	870	880	890		nm
Spectral Bandwidth	$\Delta\lambda$	$I_f=20\text{mA}$		60	80		nm
Radiated Power	P_o	$I_f=20\text{mA}$	≥ 0.6	1			mW

MEAS EMITTER ASSEMBLY ELM-4000 SERIES

SpO₂ Optical Sensor Component

INFRARED 940nm (ELM-4002)

Parameter @ 25°C	Symbol	Conditions	Min.	Typ.	Max.	Absolute	Unit
Forward Voltage	V _f	I _f =20mA		1.20	1.40		V
Reverse Voltage	V _{B_r}	I _{br} =10μA	5.0				V
Peak Wavelength	λ _p	I _f =20mA	930	940	950		nm
Spectral Bandwidth	λΔ	I _f =20mA		45			nm
Radiated Power	P _o	I _f =20mA	>=0.6	1			mW

INFRARED 905nm (ELM-4003)

Parameter @ 25°C	Symbol	Conditions	Min.	Typ.	Max.	Absolute	Unit
Forward Voltage	V _f	I _f =20mA		1.20	1.40		V
Reverse Voltage	V _{B_r}	I _{br} =10μA	5.0				V
Peak Wavelength	λ _p	I _f =20mA	900	905	910		nm
Spectral Bandwidth	λΔ	I _f =20mA		70			nm
Radiated Power	P _o	I _f =20mA	>=0.6	1			mW

Ordering Information

Description	Model	Part Number
Emitter Assembly; Lead Frame; 660nm/880nm	ELM-4001	20-0599
Emitter Assembly; Lead Frame; 660nm/940nm	ELM-4002	11032254-00
Emitter Assembly; Lead Frame; 660nm/905nm	ELM-4003	20-0584

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