

MEAS EMITTER ASSEMBLY ELM-4000 SERIES

SpO_2 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 SpO_2 optical components provide leading accuracy in oxygen level detection.

With more than 27 years of proven reliability and expertise, TE has designed SpO_2 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.

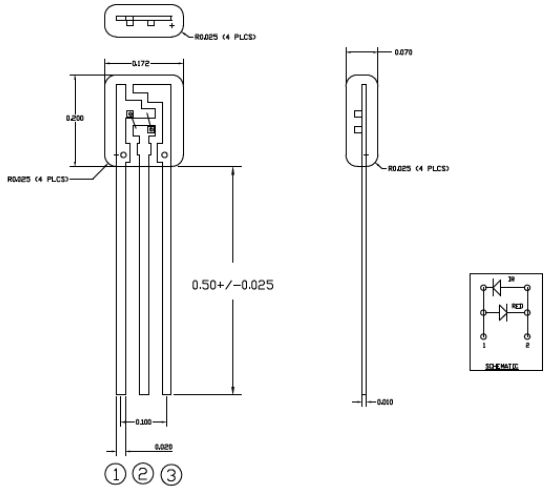
Features

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

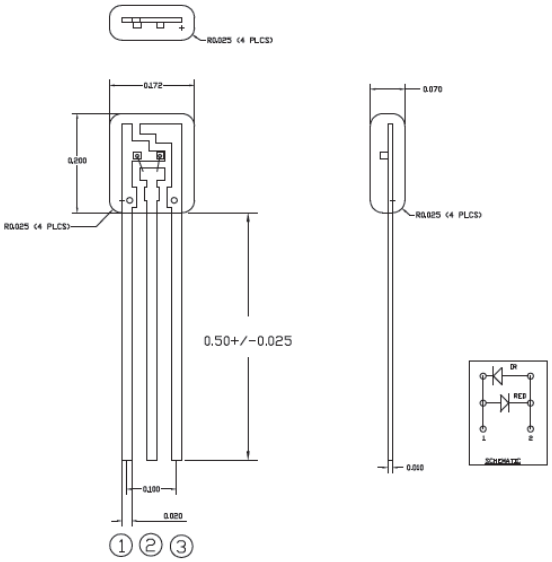
Applications

- Pulse Oximetry
- SpO_2 Finger/Ear Reusable Probes
- SpO_2 Disposable Strip or Butterfly Probes

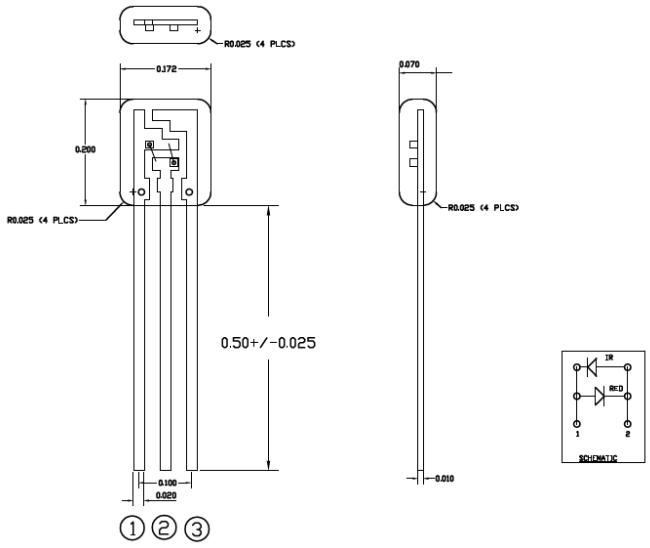
Dimensions (ELM-4001)



Dimensions (ELM-4002)



Dimensions (ELM-4003)



RED 660nm

Parameter @ 25ºC	Symbol	Conditions	Min.	Typ.	Max.	Absolute	Unit
Forward Voltage	V_f	If=20mA		1.85	2.30		V
Reverse Voltage	VB_r	Ibr=10µA	3.0				V
Reverse Current	I_r	Vr=3V			100		µA
Radiated Power	P_o	If=20mA		1			mW
Peak Wavelength	λ_p	If=20mA	657	660	663		nm

INFRARED 880nm (ELM-4001)

Parameter @ 25ºC	Symbol	Conditions	Min.	Typ.	Max.	Absolute	Unit
Forward Voltage	V_f	If=20mA			1.50		V
Reverse Voltage	VB_r	Ibr=10µA	3.0				V
Peak Wavelength	λ_p	If=20mA	870	880	890		nm
Spectral Bandwidth	λΔ	If=20mA		60	80		nm
Radiated Power	P_o	If=20mA	>=0.6	1			mW

INFRARED 940nm (ELM-4002)

Parameter @ 25ºC	Symbol	Conditions	Min.	Typ.	Max.	Absolute	Unit
Forward Voltage	V_f	If=20mA		1.20	1.40		V
Reverse Voltage	VB_r	Ibr=10µA	5.0				V
Peak Wavelength	λ_p	If=20mA	930	940	950		nm
Spectral Bandwidth	λΔ	If=20mA		45			nm
Radiated Power	P_o	If=20mA	>=0.6	1			mW

INFRARED 905nm (ELM-4003)

Parameter @ 25ºC	Symbol	Conditions	Min.	Typ.	Max.	Absolute	Unit
Forward Voltage	V_f	If=20mA		1.20	1.40		V
Reverse Voltage	VB_r	Ibr=10µA	5.0				V
Peak Wavelength	λ_p	If=20mA	895	905	915		nm
Spectral Bandwidth	λΔ	If=20mA		70			nm
Radiated Power	P_o	If=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	20-0582
Emitter Assembly; Lead Frame; 660nm/905nm	ELM-4003	20-0584

NORTH AMERICA
Measurement Specialties, Inc.,
a TE Connectivity Company
Tel: 800-522-6752
customercare.ando@te.com

EUROPE
Measurement Specialties (Europe), Ltd.,
a TE Connectivity Company
Tel: 800-440-5100
customercare.tlse@te.com

ASIA
Measurement Specialties (China), Ltd.,
a TE Connectivity Company
Tel: 0400-820-6015
customercare.shzn@te.com

TE.com/sensorsolutions

TE Connectivity, TE connectivity (logo), Measurement Specialties, and MEAS are trademarks. Other logos, product and company names mentioned herein may be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2017 TE Connectivity. All Rights Reserved.