

MEAS EMITTER ASSEMBLY ELM-5000 SERIES

SMT optical sensor component

- Dual Drive
- Pulse Oximetry Component
- Clear Epoxy
- Reflow Solderable

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 (TE) Surface Mounted Technology (SMT) optical components provide leading accuracy in oxygen level detection.

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

Emitter Assembly ELM-5000 series are specially designed for medical applications where selection of peak wavelength and reflow solderability are key requirements. Emission source material is GaAIs in conjunction with GaAlP complete with clear epoxy lens.

MEAS EMITTER ASSEMBLY ELM-5000 SERIES

SMT Optical Sensor Component

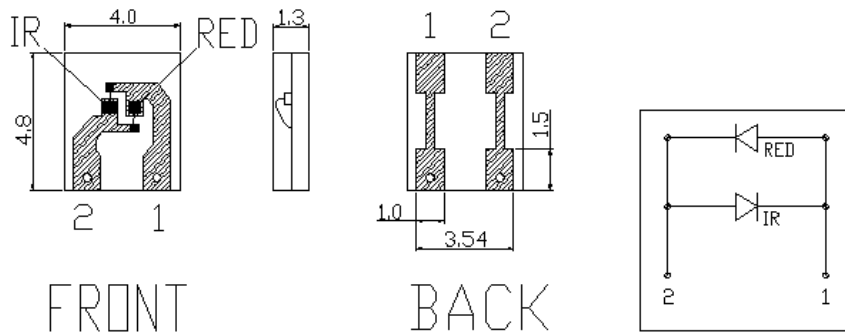
Features

- 660 nm \pm 3 nm Peak Wavelength Red LED
- Two IR Wavelength Choices
- Dual Drive

Applications

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

Dimensions (unit: mm)



RED 660nm

Parameter @ 25°C	Symbol	Conditions	Min.	Typ.	Max.	Absolute	Unit
Forward Voltage	V _F	I _F =20mA		1.8			V
Reverse Voltage	V _R	I _R =10μA	5				V
Power	P _o	I _F =20mA	1.2				mW
Peak Wavelength	λ _p	I _F =20mA	660	663	666		nm
Spectral Bandwidth	Δλ	I _F =20mA		20			nm

INFRARED 890nm (ELM-5001)

Parameter @ 25°C	Symbol	Conditions	Min.	Typ.	Max.	Absolute	Unit
Forward Voltage	V _F	I _F =20mA			1.50		V
Reverse Voltage	V _R	I _R =10μA	5				V
Power	P _o	I _F =20mA	1.0				mW
Peak Wavelength	λ _p	I _F =20mA	880	890	900		nm
Spectral Bandwidth	Δλ	I _F =20mA		75			nm

MEAS EMITTER ASSEMBLY ELM-5000 SERIES

SMT Optical Sensor Component

INFRARED 905nm (ELM-5002)

Parameter @ 25°C	Symbol	Conditions	Min.	Typ.	Max.	Absolute	Unit
Forward Voltage	V_F	$I_F=20\text{mA}$		1.26			V
Reverse Voltage	V_R	$I_R=10\mu\text{A}$	5				V
Power	P_o	$I_F=20\text{mA}$	1.0				mW
Peak Wavelength	λ_p	$I_F=20\text{mA}$	895	905	915		nm
Spectral Bandwidth	$\Delta\lambda$	$I_F=20\text{mA}$		70			nm

NOTES:

Operation Temperature: -20 to 80°C

Storage Temperature: -30 to 80°C

Moisture Protection: Components must be baked at 120°C for 72 hours before use and used up within 8 hours after baking

Reflow soldering temperature: Max. Temperature Range: 230 – 250°C

Ordering Information

Description	Model	Part Number
Emitter Assembly; SMT Optic; 660nm/890nm	ELM-5001	10104043-20
Emitter Assembly; SMT Optic; 660nm/905nm	ELM-5002	10104018-20

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.

© 2018 TE Connectivity. All Rights Reserved.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[TE Connectivity:](#)

[10104018-20](#) [10104043-20](#)