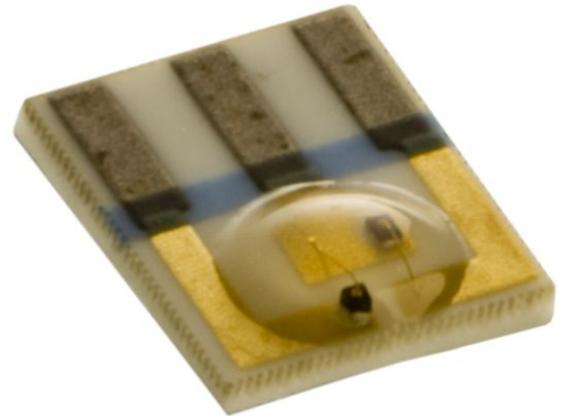


# Emitter Assembly ELM-3000 Series

Dual Drive  
Ceramic Substrate  
Pulse Oximetry Component



The **ELM-3000 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.

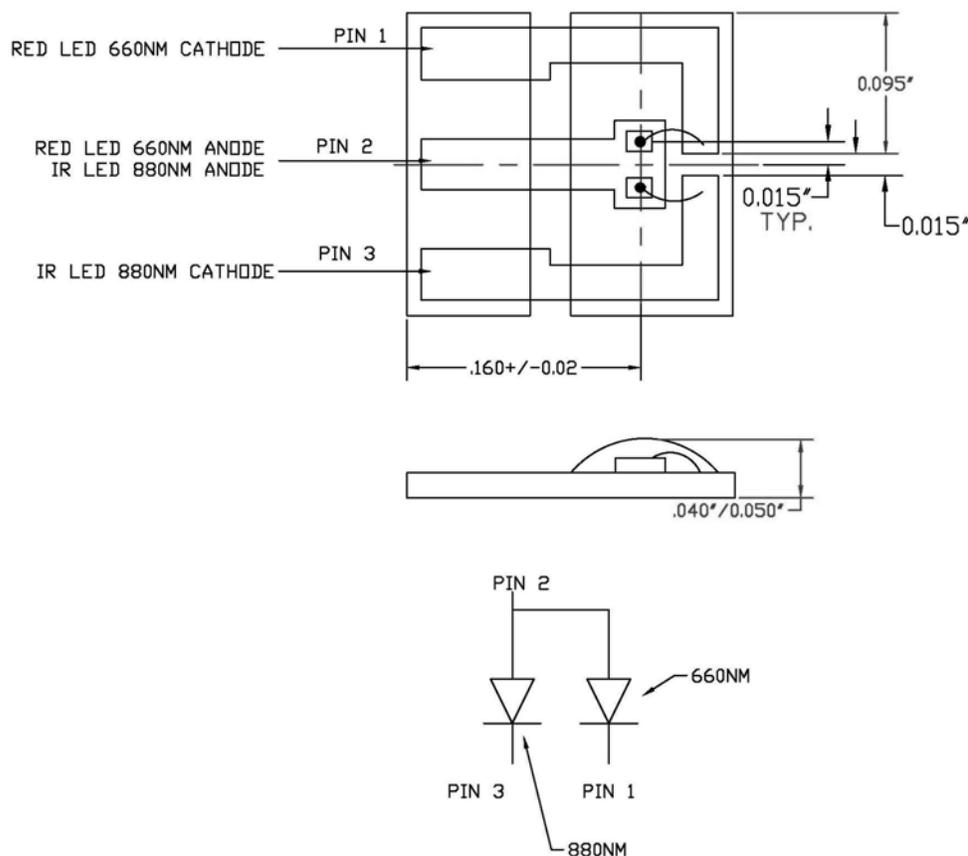
## FEATURES

- Dual LEDs (Red & IR)
- 660 nm  $\pm$ 3 nm Peak Wavelength Red LED
- Two IR Wavelength Choices
- 2-Pin or 3-Pin Leadless Ceramic Substrate

## APPLICATIONS

- Pulse Oximetry
- Finger/Ear Probes
- Soft Silicone Probes
- Medical Instrumentation

## Dimensions (ELM-3001)



# Emitter Assembly ELM-3000 Series

## 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	$V_{B_r}$	$I_{br}=10\mu\text{A}$	3.0				V
Reverse Current	$I_r$	$V_r=3\text{V}$			100		$\mu\text{A}$
Luminous Intensity	$L_v$	$I_f=20\text{mA}$	25				Mcd
Peak Wavelength	$\lambda_p$	$I_f=20\text{mA}$	657	660	663		nm
Spectral Bandwidth	$\lambda\Delta$	$I_f=20\text{mA}$		20			nm

## INFRARED 880nm (ELM-3001, ELM-3002)

Forward Voltage	$V_f$	$I_f=20\text{mA}$			1.50		V
Reverse Voltage	$V_{B_r}$	$I_{br}=10\mu\text{A}$	3.0				V
Reverse Current	$I_r$	$V_r=3\text{V}$			100		$\mu\text{A}$
Peak Wavelength	$\lambda_p$	$I_f=20\text{mA}$	870	880	890		nm
Spectral Bandwidth	$\lambda\Delta$	$I_f=20\text{mA}$		60	80		nm
Total Output	$P_o$	$I_f=20\text{mA}$	$\geq 0.6$	1			mW

## INFRARED 940nm (ELM-3003, ELM-3004)

Forward Voltage	$V_f$	$I_f=20\text{mA}$		1.20	1.40		V
Reverse Voltage	$V_{B_r}$	$I_{br}=10\mu\text{A}$	5.0				V
Reverse Current	$I_r$	$V_r=3\text{V}$					$\mu\text{A}$
Peak Wavelength	$\lambda_p$	$I_f=20\text{mA}$	930	940	950		nm
Spectral Bandwidth	$\lambda\Delta$	$I_f=20\text{mA}$		45			nm
Total Output	$P_o$	$I_f=20\text{mA}$	$\geq 0.6$	1			mW

The information in this sheet has been carefully reviewed and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of such devices any license under the patent rights to the manufacturer. Measurement Specialties, Inc. reserves the right to make changes without further notice to any product herein. Measurement Specialties, Inc. makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does Measurement Specialties, Inc. assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters can and do vary in different applications. All operating parameters must be validated for each customer application by customer's technical experts. Measurement Specialties, Inc. does not convey any license under its patent rights nor the rights of others.

## Ordering Information

### Description

Emitter Assembly; Ceramic 3-Lead; 660/880nm  
 Emitter Assembly; Ceramic 2-Lead; 660/880nm  
 Emitter Assembly; Ceramic 3-Lead; 660/940nm  
 Emitter Assembly; Ceramic 2-Lead; 660/940nm

### Part Number

ELM-3001  
 ELM-3002  
 ELM-3003  
 ELM-3004

# Emitter Assembly ELM-3000 Series