

MEAS EMITTER ASSEMBLY ELM-4000 SERIES

Photo Optic Sensor

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

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 GaAIAs in conjunction with GaAlP complete with clear epoxy lens.

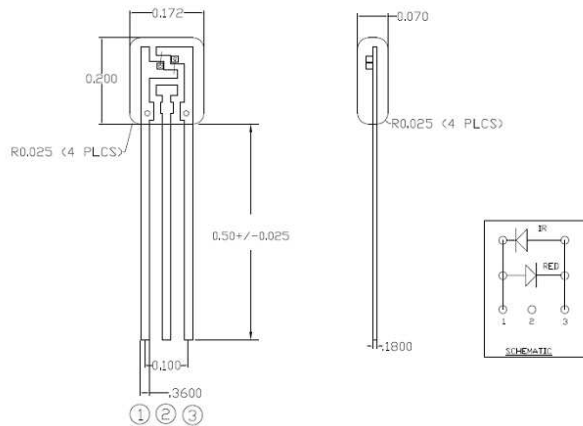
Features

- Low Cost
- 660 nm \pm 3 nm Peak Wavelength Red LED
- Three IR Wavelength Choices
- Dual Drive

Applications

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

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_{Br}	$I_{br}=10\mu\text{A}$	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_{Br}	$I_{br}=10\mu\text{A}$	3.0				V
Peak Wavelength	λ_p	$I_f=20\text{mA}$	870	880	890		nm
Spectral Bandwidth	$\lambda\Delta$	$I_f=20\text{mA}$		60	80		nm
Radiated Power	P_o	$I_f=20\text{mA}$	≥ 0.6	1			mW

INFRARED 940nm (ELM-4002)

Parameter @ 25°C	Symbol	Conditions	Min.	Typ.	Max.	Absolute	Unit
Forward Voltage	V_f	$I_f=20\text{mA}$		1.20	1.40		V
Reverse Voltage	V_{Br}	$I_{br}=10\mu\text{A}$	5.0				V
Peak Wavelength	λ_p	$I_f=20\text{mA}$	930	940	950		nm
Spectral Bandwidth	$\lambda\Delta$	$I_f=20\text{mA}$		45			nm
Radiated Power	P_o	$I_f=20\text{mA}$	≥ 0.6	1			mW

INFRARED 905nm (ELM-4003)

Parameter @ 25°C	Symbol	Conditions	Min.	Typ.	Max.	Absolute	Unit
Forward Voltage	V_f	$I_f=20\text{mA}$		1.20	1.40		V
Reverse Voltage	V_{Br}	$I_{br}=10\mu\text{A}$	5.0				V
Peak Wavelength	λ_p	$I_f=20\text{mA}$	900	905	910		nm
Spectral Bandwidth	$\lambda\Delta$	$I_f=20\text{mA}$		70			nm
Radiated Power	P_o	$I_f=20\text{mA}$	≥ 0.6	1			mW

Ordering Information

Description	Part Number
Emitter Assembly; Lead Frame; 660nm/880nm	ELM-4001
Emitter Assembly; Lead Frame; 660nm/940nm	ELM-4002
Emitter Assembly; Lead Frame; 660nm/905nm	ELM-4003