

# US-Lasers: 780nm-5mW - Infrared Laser Diode and Infrared Diode Laser Module

**Links to Laser Diode & Laser Module Configurations and Specifications >>>>>>>>>**

[Laser Diode](#)

[Laser Diode Module](#)

[Micro Laser Module](#)

[Variable Output Laser Diode Module](#)

[N780-5](#)

[NM780-5](#)

[MM780-5](#)

<b>Barrel Specs:</b> <ul style="list-style-type: none"> <li>• 2 Pieces</li> <li>• 12 - 56 Thread Size</li> <li>• Dia: 6.4mm</li> <li>• Length: 17mm</li> </ul>	<b>Weight &amp; Wire Lengths:</b> <ul style="list-style-type: none"> <li>• Module with 6" wire leads - 49 grain wt.b</li> <li>• Module without 6" wire leads - 42 grain wt</li> <li>• Module with spring leads - 42 1/2 grain wt.</li> <li>• Spring 2.4mm dia. 4mm long (trimmable)</li> </ul>	<b>Lens Housing Specs:</b> <ul style="list-style-type: none"> <li>• 12 - 56 Thread Size</li> <li>• 3.0mm Aperture</li> <li>• 4.0mm Plastic Lens</li> </ul>
--	--	--

## INFRARED DIODE LASER DATA SHEET

**ABSOLUTE MAXIMUM RATINGS - (Tc=25 °C)**

<b>TECHNICAL DATA for LASER DIODE</b> <ul style="list-style-type: none"> <li>• Index Guided MQW Structure</li> <li>• Wavelength: 780nm (Typ.)</li> <li>• Optical Power: 5mW CW</li> <li>• Threshold Current: 25mA (Typ.)</li> <li>• Standard Package: 5.6mm</li> </ul>	<p>1 laser cathode 2 common case 3 monitor diode anode</p>	
Infrared light output	780nm	<b>Pin Out Diagram - Style A</b>
Optical power output	5mW CW	
Package Type	5.6mm	
Built-in photo diode for monitoring laser output		

Items	Symbols	Values	Unit
Optical output power	Po	5	mW
Laser diode reverse voltage	VLDR	2	V
Photo diode reverse voltage	VPDR	30	V
Operating temperature	Topr	-10 ~ +40	°C
Storage temperature	Tstg	-40 ~ +85	°C

### OPTICAL and ELECTRICAL CHARACTERISTICS - (Tc=25 °C)

Items	Symbols	Min.	Typ.	Max.	Unit	Test Condition
Optical output power	Po	-	5	-	mW	-
Threshold current	Ith	15	25	40	mA	-
Operating current	Iop	25	35	50	mA	Po=5mW
Operating voltage	Vop	1.9	2.1	2.5	V	Po=5mW
Lasing wavelength	λ D	770	780	790	nm	Po=5mW
Beam divergence	θ F	8	11	15	deg	Po=5mW
Beam divergence	θ z	20	35	45	deg	Po=5mW
Slope Efficiency (mW/mA)	η	0.1	0.3	0.6	-	-
Monitor current	Im	100	200	600	μ A	Po=5mW, Vr=5V
Astigmatism	As	-	11	-	μ m	Po=5mW
MTTF			3000-5,000 hrs.			Po=5mW, NA=0.4
Emitter Size			1 x 4 Microns			
Emitter Distance to Cap Lens Structure			0.3mm			
			Index Guided			