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[US-Lasers, Inc.](#)  
[M7805I](#)

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

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TECHNICAL DATA for LASER MODULE		
<b>Barrel Specs:</b> <ul style="list-style-type: none"> <li>3/8 - 56 Thread Size</li> <li>Dia: 10.4mm</li> <li>Length: 17mm</li> </ul>	<b>Collect Specs:</b> <ul style="list-style-type: none"> <li>3/8 - 56 Thread Size</li> <li>4.3mm Aperature</li> <li>Half Hard Brassbbb</li> </ul>	<b>Lens Housing Specs:</b> <ul style="list-style-type: none"> <li>3/8 - 56 Thread Size</li> <li>3.7mm Aperature</li> <li>7mm Plastic Lens</li> </ul>

### INFRARED DIODE LASER DATA SHEETS

ABSOLUTE MAXIMUM RATINGS - (Tc=25 °C)

TECHNICAL DATA		
<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>		
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)	0	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		0.3mm				
Structure		Index Guided				