

# US-Lasers: 850nm-5mW - Infrared Laser Diode and Infrared Diode Laser Module

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

[Laser Diode](#)

[Laser Diode Module](#)

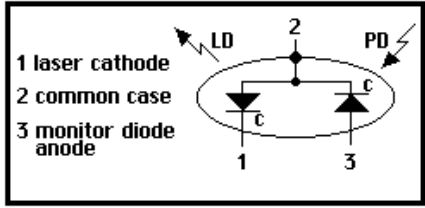
[Micro Laser Module](#)

[Variable Output Laser Diode Module](#)

**MM850-5**

<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>
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**INFRARED DIODE LASER 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: 850nm (Typ.)</li> <li>Optical Power: 5mW CW</li> <li>Threshold Current: 20mA (Typ.)</li> <li>Standard Package: 5.6mm</li> </ul>									
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Infrared light output</td> <td>850nm</td> </tr> <tr> <td>Optical power output</td> <td>5mW CW</td> </tr> <tr> <td>Package Type</td> <td>5.6mm</td> </tr> <tr> <td colspan="2">Built-in photo diode for monitoring laser output</td> </tr> </table>	Infrared light output	850nm	Optical power output	5mW CW	Package Type	5.6mm	Built-in photo diode for monitoring laser output		<p><b>Pin Out Diagram - Style A</b></p>
Infrared light output	850nm								
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	10	20	35	mA	-
Operating current	Iop	15	25	45	mA	Po=5mW
Operating voltage	Vop	2.0	2.4	2.7	V	Po=5mW
Lasing wavelength	λ D	840	850	860	nm	Po=5mW
Beam divergence	θ F	8	10	11	deg	Po=5mW
Beam divergence	θ z	25	31	40	deg	Po=5mW
Slope Efficiency (mW/mA)	0	0.4	0.5	0.7	-	-
Monitor current	Im	10	100	200	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					