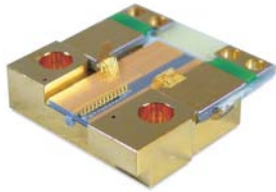


## LU0808Fyyy 808nm Multi Emitter Laser Diode on F-Mount Up to 16W c.w. or 25W Pulsed Power



### Description:

The LU0808F160 series offers high optical output power of up to 16W in c.w. operation from a multi emitter. Long lifetime is ensured due to the Lumics proprietary laser diode facet passivation technology. This performance makes them a valuable tool for the highly efficient medical laser treatment. Further important applications are micro material processing with exceptional power densities and illumination applications.

### Features & Functions:

- Two 400µm pitch
- 2 x 190µm emitter
- Wavelength 808nm
- 790 to 840nm on request
- Burn-in tested
- Holes for mounting
- Copper base
- Electrically isolated
- Option: FAC lens

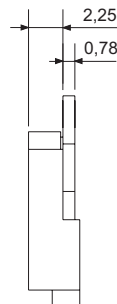
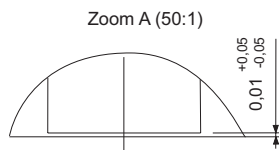
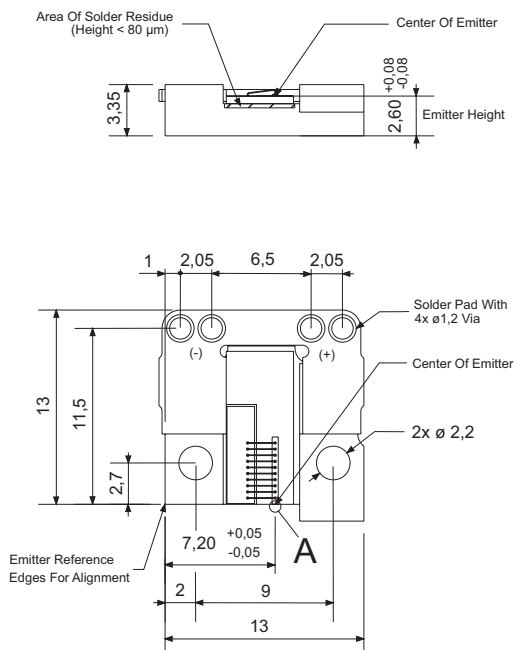
### Benefits:

- Small footprint
- High reliability
- Field proven reliability

### Applications:

- Pumping (SSL)
- Plastic welding
- Marking
- Illumination
- Medical treatment

### Drawing (dimensions in mm)

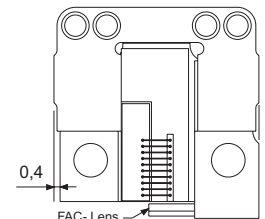


### Connections

Contact Pad	Function
(+)	LD Anode (+)
(-)	LD Cathode (-)

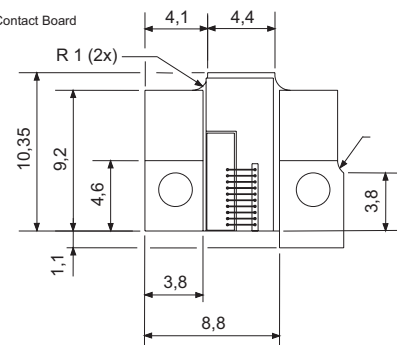
#### Option

Additional FAC-Lens



#### Option

Without Contact Board



**Your ideas are welcome.**

## Typical Electrical and Optical Characteristics

Parameter	Symbol	LU0808F160	Unit
Emitter Width	W	2 x 190	µm
Pitch of the 2 emitters		400	µm
c.w. Operating Power	$P_{op (c.w.)}$	16	W
c.w. Operating Current	$I_{op (c.w.)}$	18	A
Pulsed (1) Operating Power	$P_{op (< 100\mu sec \text{ pulse} / < 20\% \text{ d.c.})}$	25	W
Pulsed (1) Operating Current	$I_{op (< 100\mu sec \text{ pulse} / < 20\% \text{ d.c.})}$	25	A
Threshold Current	$I_{th}$	4000	mA
Forward Voltage	$V_{op}$	1.8	V
Slope Efficiency	$\lambda_{diff}$	1.15	W / A
Peak Wavelength	$\lambda_{peak}$	808+/-10 (2)	nm
Spectral Width (fwhm)	$\lambda_{rms}$	3	nm
Beam Divergence (horizontal) <sub>(3)</sub>	2 beams, slow axis	8	deg
Beam Divergence (vertical) <sub>(3)</sub>	fast axis	28	deg
AR Reflectivity <sub>(4)</sub>	$r_f$	2-3	%
HR Reflectivity	$r_r$	95	%
Spectral Shift with Temp.	$\lambda_{T\_shift}$	0.3	nm / K
Spectral Shift with Current	$\lambda_{P\_shift}$	0.5	nm / A
Operating Temp.	$T_{op}$	20-30	°C
<b>Option: FAC lense</b>			
Fast axis (vertical) divergence	NA	< 3	mrاد
Vertical width of the beam		< 0.8	mm

### Important Notes:

- (1) Typical pulse condition: pulse <100µsec / d.c. 10%
- (2) 808nm +/-3nm, or other wavelength (790 to 840nm) on request
- (3) Fwhm at Pop
- (4) Optionally other coatings are offered on request

## Absolute Maximum Ratings

Parameter	Symbol	LU0808F150	Unit
LD c.w. Forward Current	$I_{op, (c.w.) \text{ max}}$	20	A
LD pulsed (<30µsec) Forward Current	$I_{op, (pulsed) \text{ max}}$	28	A
LD Reverse Voltage	$V_{R, \text{ max}}$	2	V
Maximum Processing Temperatures:			
Solder pads for LD contacts / max 5sec.	$T_{Op \text{ max, solder pad}}$	250	°C
Soldering of Cu base block / max 5sec.	$T_{Op \text{ max, Cu base}}$	150	°C
Rel. Humidity, Storage Temperature and Operating Heat Sink Temperature <sub>(1)</sub>			

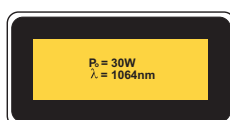
### Note:

Absolute Maximum Ratings may be applied to the laser module for short periods of time only. Exposure to maximum ratings for extended periods of time or exposure above one or more maximum ratings may cause damage or affect the reliability of the device.

- (1) Operating Temperature and Rel. Humidity must be chosen such that the dewpoint of humid air around the laser diode is below the operating heat sink temperature to avoid condensing of water on the laser diode facet.

This product contains 1.5% BeO as solid fully metallized ceramic (CAS Number 1304-56-9), 0.05% of solid metallized InAlGaAsP crystal, as well as 0.05% Pb (CAS Number 7439-92-1)

## User Safety



Your ideas are welcome.