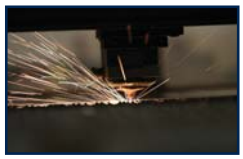
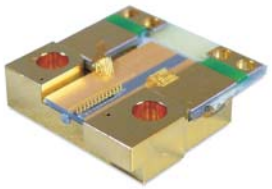





LU09xxF260

915, 940 or 975nm Double Emitter Laser Diode on F-Mount

Up to 26W c.w. / 40W Pulsed Power



Description:

The LU09xxF260 series offers high optical output power of up to 26W in c.w. operation from a double 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:

- Multi emitter
- 3 x 95µm emitter
- Wavelength 915nm, 940nm or 975nm
- Burn-in tested
- Holes for mounting
- Copper base
- Electrically isolated
- Option: FAC lense

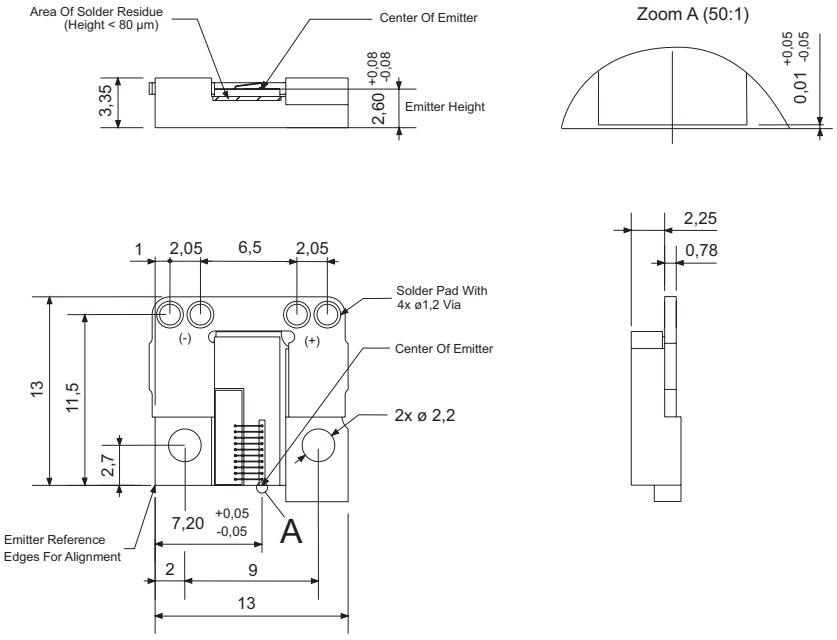
Benefits:

- Small footprint
- High reliability
- Field proven reliability

Applications:

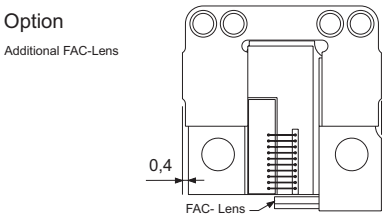
- Pumping (SSL)
- Plastic welding
- Marking
- Illumination
- Medical treatment

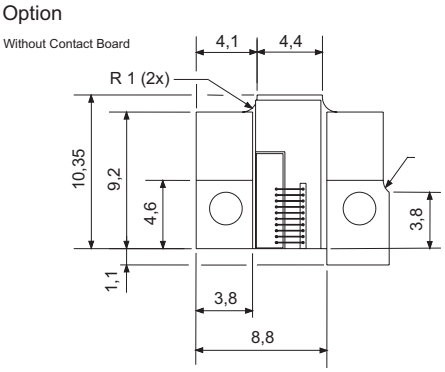
Drawing (dimensions in mm)



Connections

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





Your ideas are welcome.

Typical Electrical and Optical Characteristics

Parameter	Symbol	LU09xxF260	LU09xxF230	Unit
Emitter Width	W	2x190	3 x 94	µm
Pitch of the two emitters		400	117	µm
c.w. Operating Power	$P_{op\ (c.w.)}$	26	23	W
c.w. Operating Current	$I_{op\ (c.w.)}$	27.5	26	A
Pulsed (1) Operating Power	P_{op} (pulse)	40	35	W
Pulsed (1) Operating Current	I_{op} (pulse)	45	40	A
Threshold Current	I_{th}	<2.5	<2.5	A
Forward Voltage	V_{op}	<1.55	<1.55	V
Slope Efficiency	λ_{diff}	>0.95	>0.95	W / A
Peak Wavelength				
LU0915Fxxx	λ_{peak}	915+/-10 (2)	915+/-10 (2)	nm
LU0940Fxxx,	λ_{peak}	940+/-10 (2)	940+/-10 (2)	nm
LU0975Fxxx,	λ_{peak}	975+/-10 (2)	975+/-10 (2)	nm
Spectral Width (fwhm)	λ_{rms}	<6	<6	nm
Beam Divergence (horizontal)(2)	multi beams, slow axis	<8	<8	deg
Beam Divergence (vertical)(2)	fast axis	<30	<30	deg
AR Reflectivity	r_f	2	2	%
HR Reflectivity	r_r	95	95	%
Spectral Shift with Temp.	λ_{T_Shift}	0.3	0.3	nm / K
Spectral Shift with Current	λ_{P_Shift}	0.4	0.4	nm / A
Operating Temp.	T_{op}	20-30	20-30	°C
Option: FAC lense				
Fast axis (vertical) divergence	NA		< 3	mrad
Vertical width of the beam			< 0.8	mm

Important Notes:
(1) Typical pulse condition: pulse <100µsec / d.c. 1%
(2) Fwhm at Pop
(3) Optionally other coatings are offered on request

Absolute Maximum Ratings

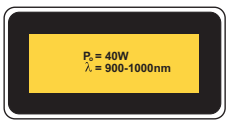
Parameter	Symbol		Unit
LD c.w. Forward Current	$I_{op,\ (c.w.)\ max}$	30	A
LD pulsed (<30µsec) Forward Current 2x190µm	$I_{op,\ (pulsed)\ max}$	50	A
LD pulsed (<30µsec) Forward Current 3x95µm	$I_{op,\ (pulsed)\ max}$	45	A
LD Reverse Voltage	$V_{R,\ max}$	2	V
Maximum Processing Temperatures:			
Solder pads for LD contacts / max 5sec.	$T_{Op\ max,\ solder\ pad}$	250	°C
Soldering of Cu base block / max 5sec.	$T_{Op\ max,\ Cu\ base}$	150	°C
Rel. Humidity, Storage Temperature and Operating Heat Sink Temperature(1)			

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

(1) Operating Temperature and Rel. Humidity must be choosen 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 Nummer 7439-92-1)

User Safety



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