Website

Everbright Photonics

Laser brighten our life

EVERBRIGHT

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E20240104-V2

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Stock code:688048

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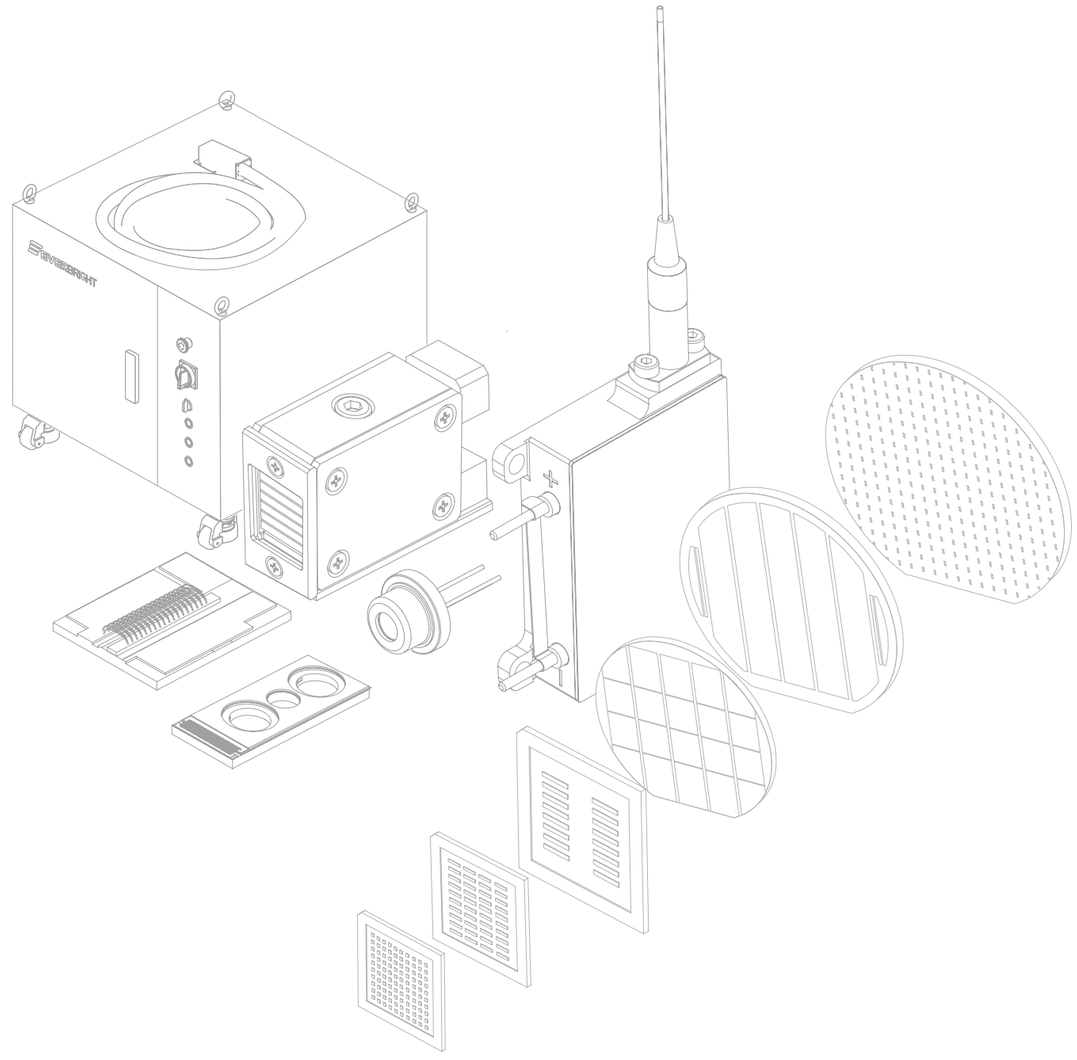
IDM DIODE LASER MANUFACTURER



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CATALOG

CLASSIFICATION	SERIES	WAVELENGTH	POWER	APPLICATION
HIGH POWER DIODE LASER CHIP	BC SERIES	915nm	12W-50W	R&D; Industrial Pump; Laser Equipment; Biomedica;
		976nm	12W-50W	
	BB SERIES	808nm	50W/60W/100W/500QW	
		940nm	200W/700QW	
HIGH-SPEED OPTICAL COMMUNICATION CHIP	10G APD	1270nm	-	10G application
	10G EML	1577nm	10dBm	10G PON OLT FTTX
	25G NRZ VCSELs	850nm	-	25G/100G Ethernet
	50G PAM4 VCSELs	850nm	-	50G/200G/400G Ethernet; 200G to 100G Breakout;
	56GBd PAM4 EML CoC	1271/1291/1311/1331nm	-	100G/400G/800G Ethernet;
	100mW CW DFB	1311nm	100mW	Data Center;
LIDAR AND 3D SENSING CHIP	3D Sensing SL SERIES	940nm	1.5W	Gesture Recognition; Face Recognition;
	3D Sensing TOF SERIES	808nm	1W	Machine Vision; Security Lighting;
		940nm	2W/3W	
	LIDAR VCSEL SERIES	905nm	30W/60W	Lidar;
	LIDAR EEL SERIES	905nm	75W/125W/160W/500W/1200W	Lidar Lidar For Automatic; Machine Vision;
	Laser Aesthetic & Heating	808/940nm	3W	Medical Beauty; Laser Heating;
LASER DEVICE	COS SERIES	915nm	12W-50W	R&D; Industrial Pump; Laser Equipment; Biomedical;
		975nm	12W-50W	
	MCC SERIES	808nm	50W/60W/100W/500QW	
		940nm	200W/700QW	
	TO SERIES	830nm	1W	Biomedical;
FIBER COUPLED PUMP SOURCE	9XXNM SERIES	915nm	280W/380W/500W/750W/1050W	Medium / High power industrial fiber laser pumping
		976nm	65W/140W/280W/360W/480W /660W/1000W	
	9XXNM SERIES VBG	976nm	60W/100W/260W/500W	R&D high performance fiber laser pumping
SOLID-STATE LASER PUMP SURCE	8XXNM SERIES	808nm	25W/30W/50W/135W	Solid-state laser pumping
		878.6nm/888nm	30W/65W/115W/175W /235W/325W	
STACK	MCP SERIES	808nm	60W/100W/300QW	R&D; Industrial Pump; Biomedica;
	QCP SERIES	808nm	200QW	
	STACK-BCC SERIES	808nm	100W	
DIRECT DIODE LASER	HUNDRED-WATT	915/976NM	100W/200W/300W/500W/750W/1000W	Plastic Welding; Brazing; Metal heat conduction welding; Hybrid welding; Laser hardening; Laser cladding; Additive manufacturing; Transparent Plastic Weldling; Silicon Wafer Cutting;
	KILO-WATT	976NM	1500|2000|3000|4000W/6000W	
	TEN THOUSAND -WATT	976NM	10000|12000W	
	QCW SERIES	915/976NM	1000|1500|2000W	
	EXTRAORDINARY WAVELENGTH	1710NM	50W	
	SUPPORTING/OTHER	976NM	EB-DDLM-3030A	Double Position Soldering Laser Precision Soldering Micro LED Mass Welding
			30×2W/150W	
		9XXNM	-	Hundred-Watt/ Medium Power Direct Diode Laser ;

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COMPANY PROFILE

VISION&MISSION

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CORE VALUES

POSS-Anything is possible

P ▸ **O** ▸ **S** ▸ **S**

Professional Observant Serving Striving

Suzhou Everbright Photonics Co., Ltd. (hereinafter referred to as Everbright ,stock code:688048) is a company specializing in high-power diode laser chips, LiDAR and 3D sensing chips, high-speed optical communication diode laser chips and related optoelectronic device,application systems. A high-tech enterprise engaged in R&D, production and sales. Products are widely used in: industrial laser pumping, advanced laser manufacturing equipment, biomedical, high-speed optical communication, machine vision and sensing, etc.

Everbright has a number of high-level talents, and the team has won many awards for major innovation teams and leading talents at all levels.Everbright has built a complete process platform and mass production line for high-power diode laser chips, and is one of the few companies in the world that develops and mass-produces high-power diode laser chips.

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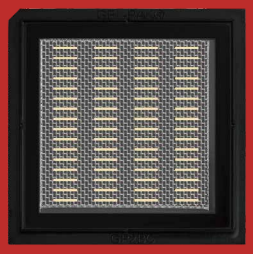
HIGH POWER DIODE SINGLE EMITTER LASER CHIP



		BC SERIES						
Optical								
Center Wavelength	nm	915/976						
Wavelength Tolerance	nm	±10/±3						
Output Power	W	12	13	25	30	35	35	50/47
Operating Mode	#	CW						
Fast-axis Divergence	Deg	55						
Slow-axis Divergence	Deg	9	9	9.5	9.5	9.5	10.5	10
Spectral Width (FWHM)	nm	4						
Wavelength Temperature Coefficient	nm/℃	0.33						
TE Polarization	%	97						
Electrical								
Power Conversion Efficiency	%	63	63	63	62	60	62	62
Slope Efficiency	W/A	1.17/1.10	1.17/1.10	1.17/1.10	1.17/1.14	1.15/1.10	1.17/1.14	1.15/1.10
Thershold Current	A	0.6/0.7	0.8/0.9	1.4/1.1	1.6/1.2	1.8/1.5	1.8/1.5	2.6/2.0
Operating Current	A	11/12	12/13	24/25	29/30	35/36	34/36	50
Operating Voltage	V	1.65/1.55	1.65/1.55	1.65/1.55	1.72/1.55	1.72/1.58	1.72/1.58	1.65/1.55
Geometric Size								
Emitter Width	μm	90	120	195	230	230	290	334
Cavity Length	mm	4.5	4.5	4.5	4.5	5.6	4.5	5.6
Width	μm	400	400	400	400	400	450	500
Thickness	μm	145	145	145	145	145	145	145

Application

- R&D
- Laser Equipment
- Industrial Pump
- Biomedical

Product Features

- High Power
- High Efficiency
- High Reliability

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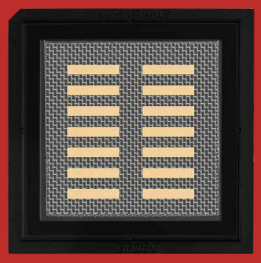
HIGH POWER DIODE BAR LASER CHIP



		BB SERIES					
Optical							
Center Wavelength	nm	808				940	
Wavelength Tolerance	nm	±10	±10	±10	±3	±3	±3
Output Power	W	50	60	100	500	200	700
Fast-axis Divergence 95%E	Deg	65	65	65	65	55	55
Slow-axis Divergence 95%E	Deg	8.5	8.5	8.5	8.5	8.5	8.5
Spectral Width (FWHM)	nm	2.5	2.5	3	3.5	3	5
TE Polarization	TM/TE	TE	TE	TE	TE	TE	TE
Wavelength Temperature Coefficient	nm/℃	0.28	0.28	0.28	0.28	0.3	0.3
Electrical							
Power Conversion Efficiency	%	55	55	55	58	63	64
Slope Efficiency	W/A	1.25	1.25	1.25	1.25	1.1	1.15
Threshold Current	A	8	12	15	24	25	25
Operating Current	A	50	60	105	430	210	650
Operating Voltage	V	1.8	1.8	1.8	2	1.6	1.7
Pulse Width	us	–	–	–	200	–	200
Pulse frequency	Hz	–	–	–	400	–	400
Pulse duty cycle	%	–	–	–	8	–	8
Geometric Size							
Number of Emitters	#	19	49	49	34	24	34
Emitter Width	μm	150	100	100	232	200	232
Emitter Pitch	μm	500	200	200	290	400	290
Fill Factor	%	30	50	50	80	50	80
Cavity Length	mm	1	1	1.5	1.5	3	2.5
Bar Thickness	μm	145	145	130	115	115	115
Bar Length	mm	10	10	10	10.05	10.25	11.06
Thermal							
Operating Temperature	℃	25	25	25	25	20	25
Storage Temperature	℃	-40~80	-40~80	-40~80	-40~80	-40~80	-40~80
Flow Velocity	L/min	0.25	0.25	0.25	0.25	0.25	0.25

Application

- R&D
- Laser Equipment
- Industrial Pump
- Biomedical

Product Features

- High Power
- High Efficiency
- High Reliability

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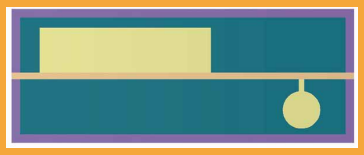

10G 1577nm EML
HIGH SPEED OPTICAL COMMUNICATION CHIP

Product List

Product Code	Description	Type	Date Rate	Operating Temperature
EB-EML-1577-10-01	10G 1577nm EML	Chip	10G	45~50°C

Characteristics

	Unit	Min	Typical	Max	Notes
Average Operating Current	mA	70		115	BOL
Bias Voltage for LD	V		1.3	2	CW, I_{op}, T_{op}
Threshold Current	mA			40	T_{op}
Kink	%			10	
Center Wavelength	nm	1575	1577	1580	T_{op}
20dB Bandwidth	nm			0.3	
Wavelength Shift with Temperature	nm/°C		0.12	0.13	
Side Mode Suppression Ratio	dB	35			CW, I_{op}, T_{op}
Modulation Amplitude	V	1.6	1.8	2.2	
Bias Voltage of EAM	V	-0.5	-1.7	-2	
Optical Output Power (front facet)	dBm	10			CW, I_{op}, V_{eam} = 0 V, T_{op}
AC Extinction Ratio	dB	8.5			
Bandwidth	GHz	10			

Application

- 10G PON/FTTx

Product Features

- High Power
- High Extinction Ratio

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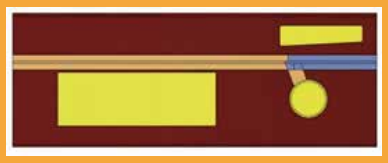
56GBd PAM4 EML CoC
HIGH SPEED OPTICAL COMMUNICATION CHIP



Product List

Product Code	Description	Type	Date Rate	Operating Temperature
EB-EML-7-1271-56-02	56GBd PAM4 EML chip on carrier, 1271 nm	CoC	100G	50-60°C
EB-EML-7-1291-56-02	56GBd PAM4 EML chip on carrier, 1291 nm	CoC	100G	50-60°C
EB-EML-7-1311-56-02	56GBd PAM4 EML chip on carrier, 1311 nm	CoC	100G	50-60°C
EB-EML-7-1331-56-02	56GBd PAM4 EML chip on carrier, 1331 nm	CoC	100G	50-60°C

Characteristics

	Unit	Min	Typical	Max	Notes
Average Operating Current	mA	50		96	
Forward Voltage for LD	V		1.5	1.8	T_{op} = 52.5°C, I_{op}, CW
Laser Wavelength	nm	1264.50		1277.50	T_{op} = 52.5°C, I_{op} = 60 mA, CW
	nm	1284.50		1297.50	
	nm	1304.50		1317.50	
	nm	1324.50		1337.50	
Side Mode Suppression Ratio	dB	35			I_{op}, T_{op} = 52.5°C
Relative Intensity Noise	dB/Hz			-142	I_{op}, T_{op} = 52.5°C
Kink				0.1	I_{op} = (I_{th} + 5) mA to 96 mA Kink Free
AC Extinction Ratio	dB	4.0			T_{op}, V_{pp} = 1.2 V
Average Optical Power	dBm	7			T_{op} = 52.5°C, I_{op} = 80 mA, V_{EAM}=0V
3dB Bandwidth	GHz	35			CoC, I_{op}, T_{op}, VEAM = V_{bias}

Application

- 100G/400G/800G Ethernet

Product Features

- High Bandwidth
- High Power
- Low Power Consumption
- Low RIN

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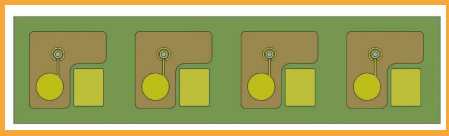

25G NRZ VCSELs

HIGH SPEED OPTICAL COMMUNICATION CHIP

Product List

Product Code	Description	Type	Date Rate	Operating Temperature
EB-VCSEL-5.25-850-25-01	25G NRZ VCSEL	Single Chip	25G	5~75°C
EB-VCSEL-5.25-850-25-02	1 x 4 25G NRZ VCSEL Array	Array, 1*4	25G	5~75°C

Characteristics

	Unit	Min	Typical	Max	Notes
Average Operating Current	mA			7.5	T_s = 5°C~75°C
Threshold Current	mA	0.2		1.5	T_s = 5°C~75°C
Output Power	mW	2		4.7	I_f = 7.5 mA, T_s = 5°C~75°C
Slope Efficiency	W/A		0.45		I_f = 7.5 mA, T_s = 5°C~75°C
Forward Voltage	V			2.5	I_f = 7.5 mA, T_s = 5°C~75°C
Series Resistance	Ohm	45		80	I_f = 7.5 mA, T_s = 5°C~75°C
Center Wavelength	nm	840	850	860	I_f = 7.5 mA, T_s = 5°C~75°C
Center Wavelength Temperature Variation	nm/°C		0.065		
Spectral Width (RMS)	nm		0.4	0.6	I_f = 7.5 mA, T_s = 5°C~75°C
Small Signal Modulation Bandwidth	GHz		16.5		I_f = 7.5 mA, T_s = 5°C~75°C
Relative Intensity Noise	dB/Hz		-140	-128	I_f = 7.5 mA, T_s = 5°C~75°C

Application

- 25G/100G Ethernet

Product Features

- High Bandwidth
- Narrow Spectral Width

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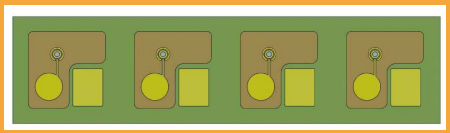
50G PAM4 VCSELs
HIGH SPEED OPTICAL COMMUNICATION CHIP



Product List

Product Code	Description	Type	Date Rate	Operating Temperature
EB-VCSEL-5.25-850-50-01	50G PAM4 VCSEL	Single Chip	50G	5~75°C
EB-VCSEL-5.25-850-50-02	1 x 2 50G PAM4 VCSEL Array	Array, 1*2	50G	5~75°C
EB-VCSEL-5.25-850-50-03	1 x 4 50G PAM4 VCSEL Array	Array, 1*4	50G	5~75°C

Characteristics

	Unit	Min	Typical	Max	Notes
Average Operating Current	mA			7.5	T_s = 5°C~75°C
Threshold Current	mA	0.2		1.5	T_s = 5°C~75°C
Output Power	mW	2		4.7	I_f = 7.5 mA, T_s = 5°C~75°C
Slope Efficiency	W/A		0.45		I_f = 7.5 mA, T_s = 5°C~75°C
Forward Voltage	V			2.5	I_f = 7.5 mA, T_s = 5°C~75°C
Series Resistance	Ohm	50		80	I_f = 7.5 mA, T_s = 5°C~75°C
Center Wavelength	nm	840	850	860	I_f = 7.5 mA, T_s = 5°C~75°C
Center Wavelength Temperature Variation	nm/°C		0.065		
Spectral Width (RMS)	nm		0.4	0.6	I_f = 7.5 mA, T_s = 5°C~75°C
Small Signal Modulation Bandwidth	GHz		19		I_f = 7.5 mA, T_s = 5°C~75°C
Relative Intensity Noise	dB/Hz		-146	-140	I_f = 7.5 mA, T_s = 5°C~75°C

Application

- 50G/200G/400G Ethernet
- 200G to 100G Breakout

Product Features

- High Bandwidth
- Narrow Spectral Width
- Low RIN

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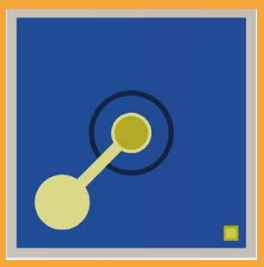
10G APD
HIGH SPEED OPTICAL COMMUNICATION CHIP



APD SERIES

Chip Specifications

	Symbol	Unit	Min	Type	Max	Test Condition
Optical						
Operating Wavelength	λ	nm	1260		1620	
Responsivity	R_e	A/W	0.8			M = 1, λ = 1270 nm, P_i = –30 dBm
		A/W	10			$V_r = V_{br}$–3 V, λ = 1270 nm, P_i = –30 dBm
–3 dB Bandwidth	f_{3dB}	GHz	5	6.5		$V_r = V_{br}$–3 V, R_L = 50Ω P_{in} = –20 dBm, λ = 1270 nm, –3dB cutoff
Electrical						
Dark Current	I_d	nA		30	100	$V_r = V_{br}$–3 V, P_i = 0 μW
		nA			1500	$V_r = V_{br}$–3 V, P_i = 0 μW, T=90 ℃
Breakdown Voltage	V_{br}	V	26		38	I_d = 10 μA
Temperature Coefficient of V_{br}	dV_{br}/dT	V/°C		0.020		T = 25°C~90°C
		V/°C		0.025		T = –40°C~25°C
Capacitance	C_j	fF		210	280	$V_r = V_{br}$–3 V, f=1 MHz
Series Resistance	R_s	Ohm	2		35	I_f = 15 mA, 16 mA
Recommended Working Voltage	V_{op}	V	V_{br}–4.5	V_{br} –3	V_{br}–1.5	
Others						
Diameter of Aperture	Φ	μm	33	35		
Length	L	μm	230	250	270	
Width	W	μm	230	250	270	
Thickness	Th	μm	110	125	140	

Absolute Maximum Rating

	Unit	Min	Max	Test Condition
Parameter				
Reverse Voltage	V		V_{br}	
Forward Current	mA		10	
Reverse Current	mA		2	
Maximum Incident Optical Power	dBm		0	0 ⩽ V_r ⩽ V_{br}–3 V, λ = 1270 nm
Operating Temperature	°C	–40	90	
Storage Temperature	°C	–40	100	RH_{stg} = 30~60%RH
Storage Relative Humidity	%RH		85	T = 25°C

ESD Design

Parameter	Threshold value	Notes
ESD Pass Voltage	150 V	C = 100 pF, R = 1.5 kΩ, HBM

Drawing

Dimensions	250*250*125μm

Product Features

- High bandwidth
- High responsivity
- High sensitivity
- Low dark current
- Low K value
- High Reliability
- Top illumination 35 μm aperture

Application

- 10G application

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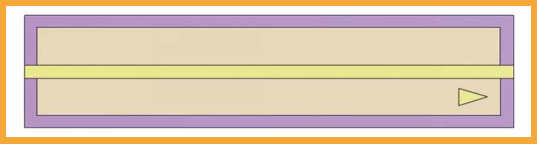
100mW CW DFB Chip

HIGH SPEED OPTICAL COMMUNICATION CHIP



Product List

Product Code	Description	Type	Date Rate	Operating Temperature
EB-DFB-100-1311-01	100mW DFB	Chip	100G	-40-85°C

Characteristics

	Unit	Min	Typical	Max	Notes
Operating Temperature	°C	0		80	
Average Operating Current	mA		350		T_{op} = 80°C
Output Power	mW	100			I_{op} , T_{op} = 80°C
Forward Voltage	V			1.7	L_{op} = 100mW
Center Emission Wavelength	nm	1304.50	1311	1317.50	L_{op} = 100mW
SMSR	dB	35			
Center Emission Wavelength Temperature Variation	nm/℃		0.1		
Beam Divergence (Vertical)	deg.		24		FWHM, L_{op} = 100mW
Beam Divergence (Horizontal)	deg.		12		FWHM, L_{op} = 100mW
Relative Intensity Noise (Average)	dB/Hz			-143	L_{op} = 100mW 0.5GHz~20GHz

Application

- Data center application

Product Features

- Edge Emitting DFB Laser
- Center Emission Wavelength:1311nm
  Qualified for non-hermetic packages
- Uncooled operation
- RoHS Complies with EU RoHs requirements

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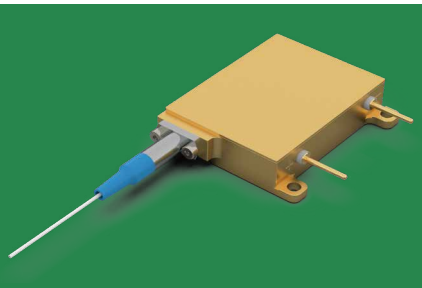
915nm
FIBER COUPLED PUMP SOURCE



		9XXNM SERIES				
Optical						
Center Wavelength	nm	915				
Wavelength Tolerance	nm	±10				
Output Power	W	280	380	500	750	1000
Spectral Width (FWHM)	nm	5				
Numerical Aperture	–	0.16	0.16	0.17	0.18	0.18
Fiber Core Diameter	μm	135	200	200	220	300
Fiber Terminal	–	Pigtail				
Fiber Length	m	2				
Electrical						
Power Conversion Efficiency	%	53	52	52	52	50
Threshold Current	A	1	1.2	1.2	1.6	1.8
Operating Current	A	18	25	25	32	34
Operating Voltage	V	29	30	40	45	58
Thermal						
Operating Temperature	℃	25				
Storage Temperature	℃	–30~60				
Wavelength Temperature Coefficient	nm / ℃	0.33				
Others						
Feedback Isolation Wavelength Range	nm	1040~1200				
Feedback Isolation Efficiency	dB	30				
Soldering Temperature	℃	260 (10 sec)				

Product Features

- High Power
- High reliability, Long lifetime
- Small Numerical Aperture

Application

- Medium / High power industrial fiber laser pumping

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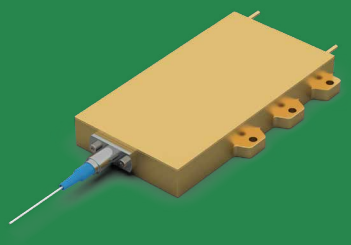
976nm
FIBER COUPLED PUMP SOURCE



		9XXNM SERIES						
Optical								
Center Wavelength	nm	976						
Wavelength Tolerance	nm	±3						
Output Power	W	65	140	250	360	480	660	1000
Spectral Width (FWHM)	nm	4.5	4.5	4.5	4.5	4.5	4.5	5.5
Numerical Aperture	–	0.15	0.16	0.17	0.16	0.17	0.18	0.16
Fiber Core Diameter	μm	105	105	135	200	200	220	300
Fiber Terminal	–	Pigtail						
Fiber Length	m	2						
Electrical								
Power Conversion Efficiency	%	54	53	52	53	53	52	52
Threshold Current	A	0.6	0.6	1	1.2	1.4	1.5	1.4
Operating Current	A	13	13	18	25	25	32	35
Operating Voltage	V	9	20	27	27.5	36	41	55
Thermal								
Operating Temperature	℃	25						
Storage Temperature	℃	–30~60						
Wavelength Temperature Coefficient	nm / ℃	0.33						
Others								
Feedback Isolation Wavelength Range	nm	1030~1200						
Feedback Isolation Efficiency	dB	30						
Soldering Temperature	℃	260 (10 sec)						

Application

- Medium / High power industrial fiber laser pumping

Product Features

- High Power
- High reliability, Long lifetime
- Small Numerical Aperture
- Narrow Spectral Width

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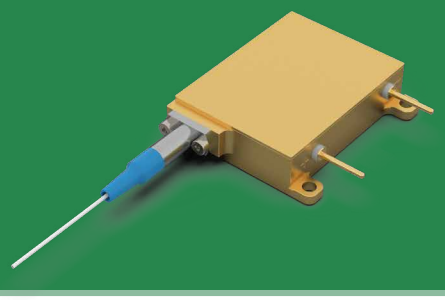
976nm VBG
FIBER COUPLED PUMP SOURCE



		9XXNM SERIES VBG	
Optical			
Center Wavelength	nm	976	
Wavelength Tolerance	nm	±0.5	
Output Power	W	60	100
Spectral Width (FWHM)	nm	0.5	0.5
Numerical Aperture	–	0.15	0.16
Fiber Core Diameter	μm	105	105
Fiber Terminal	–	Pigtail	
Fiber Length	m	2	
Electrical			
Power Conversion Efficiency	%	53	50
Threshold Current	A	0.6	0.5
Operating Current	A	13	11
Operating Voltage	V	9	19
Thermal			
Operating Temperature	℃	25	
Storage Temperature	℃	–30~60	
Wavelength Temperature Coefficient	nm / ℃	0.02	
Others			
Feedback Isolation Wavelength Range	nm	1030~1200	
Feedback Isolation Efficiency	dB	30	
Soldering Temperature	℃	260 (10 sec)	

Application

- R&D high performance fiber laser pumping

Product Features

- Full range wavelength locking
- High brightness, High power
- High E-O conversion efficiency
- Excellent SWaP

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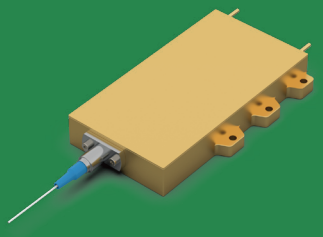
976nm VBG
FIBER COUPLED PUMP SOURCE



		9XXNM SERIES VBG	
Optical			
Center Wavelength	nm	976	
Wavelength Tolerance	nm	±0.5	
Output Power	W	260	500
Spectral Width (FWHM)	nm	0.5	0.5
Numerical Aperture	–	0.17	0.18
Fiber Core Diameter	μm	135	220
Fiber Terminal	–	Pigtail	
Fiber Length	m	2	
Electrical			
Power Conversion Efficiency	%	50	50
Threshold Current	A	0.8	1.2
Operating Current	A	18	22
Operating Voltage	V	31	48
Thermal			
Operating Temperature	℃	25	
Storage Temperature	℃	–30~60	
Wavelength Temperature Coefficient	nm / ℃	0.02	
Others			
Feedback Isolation Wavelength Range	nm	1030~1200	
Feedback Isolation Efficiency	dB	30	
Soldering Temperature	℃	260 (10 sec)	

Application

- R&D high performance fiber laser pumping

Product Features

- Full range wavelength locking
- High brightness, High power
- High E-O conversion efficiency
- Excellent SWaP

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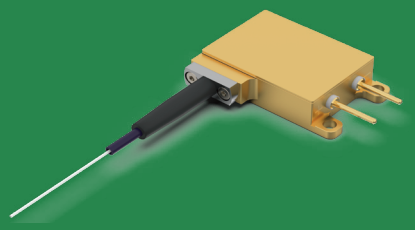
808nm
FIBER COUPLED PUMP SOURCE



		8XXNM SERIES			
Optical					
Center Wavelength	nm	808			
Wavelength Tolerance	nm	±3			
Output Power	W	25	30	50	135
Spectral Width (FWHM)	nm	1.5	1.5	1.5	1.5
Numerical Aperture	–	0.22	0.22	0.22	0.22
Fiber Core Diameter	μm	400/440	400/440	400/440	400/440
Fiber Terminal	–	SMA905			
Fiber Length	m	1.2			
Electrical					
Power Conversion Efficiency	%	45	45	45	45
Threshold Current	A	2.1	2.1	2.1	2.1
Operating Current	A	11	10	10	11
Operating Voltage	V	5.5	7	12.1	33.2
Thermal					
Operating Temperature	℃	25			
Storage Temperature	℃	–30~60			
Wavelength Temperature Coefficient	nm / ℃	0.28			
Others					
Feedback Isolation Wavelength Range	nm	1030~1200			
Feedback Isolation Efficiency	dB	>30			
Soldering Temperature	℃	260 (10 sec)			

Application

- Solid-state laser pumping

Product Features

- Flat-top beam profile
- High reliability, Long lifetime

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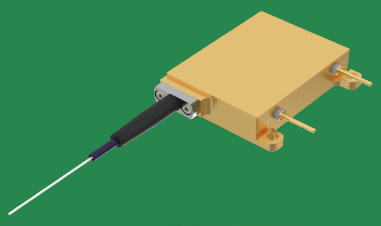
878.6nm/888nm
FIBER COUPLED PUMP SOURCE



		8XXNM SERIES					
Optical							
Center Wavelength	nm	878.6	878.6/888				
Wavelength Tolerance	nm	±0.5	±0.5				
Output Power	W	30	65	115	175	235	325
Spectral Width (FWHM)	nm	0.3	0.3	0.3	0.3	0.3	0.3
Numerical Aperture	–	0.22	0.22	0.22	0.22	0.16	0.17
Fiber Core Diameter	μm	200/400	200/400	200/400	200/400	200/400	200/400
Fiber Terminal	–	SMA905					
Fiber Length	m	1.2	1.2	1.2	1.2	1.2	1.2
Electrical							
Power Conversion Efficiency	%	53	52	52	52	50	50
Threshold Current	A	1.4	1.4	1.4	1.4	1.4	1.4
Operating Current	A	13	13	13	13	13	13
Operating Voltage	V	4.5	9.5	18.6	28	37	49.6
Thermal							
Operating Temperature	℃	25					
Storage Temperature	℃	–30~60					
Wavelength Temperature Coefficient	nm / ℃	0.02					
Others							
Feedback Isolation Wavelength Range	nm	1030~1200					
Feedback Isolation Efficiency	dB	>30					
Soldering Temperature	℃	260 (10 sec)					

Application

- Solid-state laser pumping

Product Features

- Flat-top beam profile
- Full range wavelength locking

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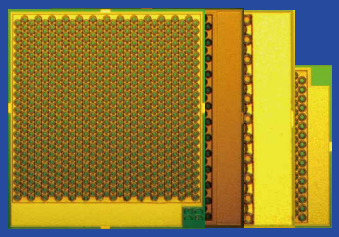
HIGH EFFICIENCY DIODE VCSEL CHIP



		LR SERIES		SL SERIES	TOF SERES				
Optical									
Center Wavelength	nm	905nm		940	808		850	940	
Wavelength Tolerance	nm	±6	±6	±6	±6	±6	±6	±6	±6
Output Power	W	30	60	1.6	1.0	3.0	4.1	2.6	3.0
Far Field Divergence Angle	°	20	18	21	21	21	26	20	21
Spectral Width (FWHM)	nm	1.5	1.5	1.8	0.8	0.8	0.7	1.5	1.2
Electrical									
E-O Conversion Efficiency	%	20.0	20.0	43.1	37.0	38.0	39.0	41.6	42.0
Slope Efficiency	W/A	4.9	5.5	1.0	0.9	1.0	1.0	1.1	1.0
Thershold Current	A	0.1	0.1	0.2	0.2	0.6	1.3	0.3	0.4
Operating Current	A	6.0	11.5	1.8	1.3	3.5	5.3	2.8	3.5
Operating Voltage	V	24.5	25.0	2.0	2.1	2.1	2.0	2.2	2.1
Geometric Size									
Emitter Number	#	12	30	377	224	621	1216	305	364
Emitter Arrangement	mm	Dense		Random	Dense				
Array size	μm^2	415*245	540*420	798*741	894*891	1205*1006	1670*1844	815*715	1000*900
Others									
Environmental Attributes	#	Rohs2.0							
Test Temperature	℃	25							

Product Features

- High Reliability
- High Efficiency
- Low Divergence Angle

Application

- Medical Beauty
- Security Lighting
- Machine Vision
- 3D Sensing

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HIGH EFFICIENCY DIODE LIDAR CHIP

		EEL SERIES				
Optical						
Center Wavelength	nm	905				
Wavelength Tolerance	nm	±10				
Output Power	W	75	125	160	500	1200
Operating Mode	#	Pluse				
Fast axis Divergence($1/e^2$)	Deg	24	24	24	24	24
Slow-axis Divergence($1/e^2$)	Deg	10	8	8	8	8
Spectral Width (FWHM)	nm	7	6	6	6	6
Wavelength Temperature Coefficient	nm/℃	0.3	0.3	0.3	0.3	0.3
Electrical						
Slope Efficiency	W/A	3.3	3.3	4.4	3.3	4.4
Thershold Current	A	0.3	0.8	0.8	3.0	6
Operating Current	A	20	40	40	160	320
Operating Voltage	V	15	11	15	11	15
Geometric Size						
Emitter Width	μm	110	200	200	200	200
Cavity Length	mm	0.8	0.8	0.8	0.8	0.8
Width	μm	400	400	400	400	400
Emitter Number	#	1	1	1	4	8
Thickness	μm	145	145	145	145	145

Product Features

- High Reliability
- Low Divergence Angle

Application

- Machine Vision
- Robotic Sensing

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STACK-MCP

		MCP SERIES		
Optical				
Center Wavelength	nm	808	808	808
Wavelength Tolerance	nm	±10	±10	±5
Output Power	W	60/bar	100/bar	300/bar
Number of Bars	#	2 ~ 60	2 ~ 60	2 ~ 60
Spectral Width (FWHM)	nm	≤8	≤8	≤5
Operating Mode	#	CW	CW	QCW
Fast-axis Divergence(FWHM)	Deg	36		
Slow-axis Divergence(FWHM)	Deg	10		
Wavelength Temperature Coefficient	nm/℃	0.28		
Electrical				
Power Conversion Efficiency	%	50		
Slope Efficiency/Bar	W/A	≥1.1/bar		
Thershold Current	A	18	20	20
Operating Current	A	60	105	290
Operating Voltage/Bar	V	2/bar		
Thermal				
Operating Temperature	℃	25	25	25
Water Velocity/Bar	l/m	0.3	0.3	0.3
Storage Temperature	℃	0~55	0~55	0~55
Entrace Maximum Pressure	psi	55		
Water Type	–	DI Water		
Deionized Water Resistivit (DI)	kΩ·cm	＜200		
Pure Water Filter Particles	μm	＜20		

Application

- R&D
- Biomedical
- Industrial Pump

Product Features

- Cost Effective
- High Reliability
- High Efficiency
- Long Lifetime

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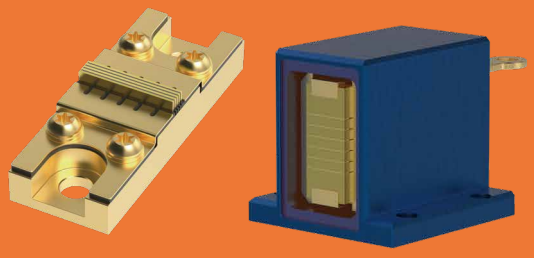
STACK-QCP/BCC



		QCP SERIES	BCC SERIES
Optical			
Center Wavelength	nm	808	808
Wavelength Tolerance	nm	±2	±10
Output Power	W	200/bar	100/bar
Number of Bars	#	1–10	5–10
Total Output Power	W	200×#	100×#
Bar–to–Bar Spacing	nm	0.4–1.8	1.8–3.5
Spectral Width (FWHM)	nm	≤4	≤10
Pulse Width	–	200μs	20–400ms
Repetition Rate	Hz	25	1–10
Fast–axis Divergence(FWHM)	Deg	36	36
Slow–axis Divergence(FWHM)	Deg	10	10
Wavelength Temperature Coefficient	nm/℃	0.28	0.28
Electrical			
Power Conversion Efficiency	%	50	50
Slope Efficiency/Bar	W/A	1.15/bar	1.1/bar
Thershold Current	A	20	20
Operating Current	A	200	100
Operating Voltage/Bar	V	2/bar	2/bar
Thermal			
Fluid Flow Rate	L/min	–	>3
Operating Temperature	℃	25~70	25
Storage Temperature	℃	–40~80	–40~85

Application

- R&D
- Biomedical
- Industrial Pump

Product Features

- Cost Effective
- High Reliability
- Ausn Hard Solder
- High Efficiency
- Long Lifetime

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Direct Diode Laser

		QCW SERIES	EXTRAORDINARY WAVELENGTH	MULTI-HUNDRED WATT CLASS		
Optical						
Center Wavelength	nm	915/976	1710	915/976	976	915/976
Wavelength Tolerance	nm	±20	±20	±20	±20	±20
Output Power	W	Output Peak Power 1000|1500|2000	50	100	200|300|500	750|1000
Output Power Unstability	%	⩽±1.5	⩽±1.5	⩽±1.5	⩽±1.5	⩽±1.5
Power Tunability	%	10-100	10-100	10-100	10-100	10-100
Fiber Core	μm	200/220/300	400	200	200	220/300
Numerical Aperture	-	⩽0.22	⩽0.22	⩽0.22	⩽0.22	⩽0.22
Fiber Connector	-	QBH	SMA905	SMA905	QBH	QBH
Fiber Length	m	5	5	5	5	5
Aming Beam						
Wavelength	nm	650	650	650	650	650
Aming Beam Power	mW	⩾2	⩾2	⩾2	⩾2	⩾2
Eletrical						
Operation Mode	-	CW/Modulation				
Modulation Frequency	Hz	1~200	1~1k	1~1k	1~1k	1~1k
Input Voltage	-	220VAC±10%, 50/60HZ				
Input Current	A	<18	<10	<10	<10	<12
Thermal						
Operating Temperature	℃	5-40				
Storage Temperature	℃	-25-55				
Environmental Humidity	-	MAX70%@25℃				
Cooling System	-	water cooled	water cooled	wind cooled	water cooled	water cooled
Others						
Dimensions	mm	363×627×115	320×626×104	484×496×133	484×550×133	363×627×115

Application

- Plastic Welding
- Brazing
- Sheet Welding
- Metal heat conduction welding

Product Features

- High E-O Efficiency
- Aming Beam
- Long lifetime
- Small Footprint

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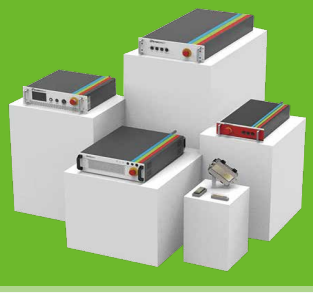
Direct Diode Laser



		MULTI-KILOWATT CLASS		MULTI-MYRIAWATT CLASS
Optical				
Center Wavelength	nm	976	976	915/976
Wavelength Tolerance	nm	±20	±20	±20
Output Power	W	1500|2000|3000|4000	6000	10000|12000
Output Power Unstability	%	⩽±1.5	⩽±1.5	⩽±1.5
Power Tunability	%	10-100	10-100	10-100
Fiber Core	μm	300/400/600/800	800	1000
Numerical Aperture	-	⩽0.22		
Fiber Connector	-	QBH		
Fiber Length	m	10	10/20	10/20
Aming Beam				
Wavelength	nm	650		
Aming Beam Power	mW	⩾2		
Eletrical				
Operation Mode	-	CW/Modulation		
Input Voltage	V	380VAC±10%, 50/60HZ		
Max. Power Consumption	kW	3.8/5/7.5/10	15	25|30
Thermal				
Operating Temperature	℃	5-40		
Storage Temperature	℃	-25-55		
Environmental Humidity	-	MAX70%@25℃		
Cooling System	-	water cooled	water cooled	water cooled
Others				
Dimensions	mm	482×652×132	470x948x120	805×905×790

Application

- Metal heat conduction welding
- Hybrid welding
- Laser hardening
- Edge Banding
- Laser cladding
- Additive manufacturing

Product Features

- High Efficiency
- Red Indicator
- Long lifetime
- Compact Size

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