

IPG Photonics Laser Marking Modules

from the World Leader in Fiber Lasers



Applications



Features



Advantages



www.ipgphotonics.com

■ The Power to Transform®

IPG Photonics Laser Marking Modules



IR Integrated Marker

- Complete module for marking integrators and OEMs
- Compact and sealed package
- Available with industry standard XY2-100 interface
- Versatile marking software with optional IPG scan controllers
- Pre-calibrated scan field
- Ethernet communication

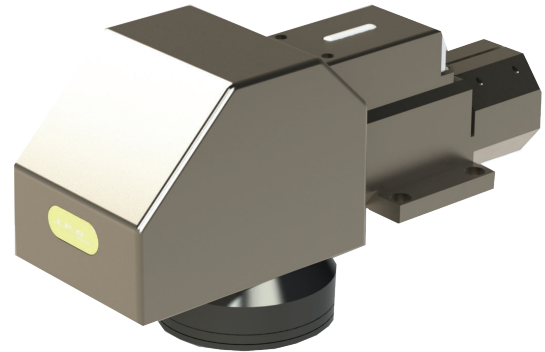




Specifications		Configuration Example	
Laser			
Average Power (W)	20 30 50 100	Lens Focal Length (mm)	163
Max Pulse Energy (mJ)	1.0	Field Size (mm ²)	110 x 110
Wavelength (nm)	1064	Working Distance (mm)	189
Pulse Duration (ns)	100	Spot Size (µm)	~ 30
Pulse Repetition Rate (kHz)	2-200	AVAILABLE ACCESSORIES	
Scan Head		Remote Automation License Upgrade To be used when external communication is need	P40-020451
Tracking Delay (ms)	0.1	Motion and I/O License Upgrade Needed for direct control of external Z axis and simple I/O automation	CEMISCX0000014PX
Repeatability (rms)	<5 µrad	External Motion Interface Board Electrical interface for 5V motion controllers	P30-003779
Mirror Clear Aperture (mm)	12	24V Robot Interface Board Electrical Interface for 24 devices (robot, PLCs)	P30-003943
Focal Length Option (mm)	100 163 254 330 420		
Mounting Configurations	Horizontal Vertical		
Other Parameters			
Control	IPG Controller, XY2-100		
Weight (lbs)	9 (Process Head)		



IR Integrated Marker with Collimator Input

- Interface to IPG's standard 35mm collimators
- Plug and Play with most IPG pulsed lasers
- Pre-calibrated scan field
- Available with industry standard XY2-100 interface



 Specifications		 Example Configuration	
Laser Options			
Average Power (W)	No Laser, 20 W, 30 W, 50 W, 100 W	Lens Focal Length (mm)	163
Max Pulse Energy (mJ)	1.0	Field Size (mm ²)	100 x 100
Wavelength (nm)	1064	Working Distance (mm)	189
Pulse Duration (ns)	100	Spot Size (μm)	~ 30
Pulse Repetition Rate (kHz)	2-200	AVAILABLE ACCESSORIES	
Scan Head		Remote Automation License Upgrade To be used when external communication is need	P40-020451
Tracking Delay (ms)	0.1	Motion and I/O License Upgrade Needed for direct control of external Z axis and simple I/O automation	CEMISX0000014PX
Repeatability (rms)	<5 μrad	External Motion Interface Board Electrical interface for 5V motion controllers	P30-003779
Mirror Clear Aperture (mm)	12	24V Robot Interface Board Electrical Interface for 24 devices (robot, PLCs)	P30-003943
Focal Length Option (mm)	100 163 254 330 420		
Mounting Configurations	Horizontal Vertical		
Other Parameters			
Control	IPG Controller, XY2-100		
Weight (lbs)	9 (Process Head)		

IPG Photonics Laser Marking Modules



UV Integrated Marker

- Integrated Marking Module
- Unmatched Tracking Delay
- Pre-calibrated Scan Field
- Detachable Scan-Head for Ease of Service
- 355 nm Wavelength for Processing a Broad Range of Materials
- Integrated Guide Beam



Specifications		Configuration Example			
Laser					
Average Power (W)	3 – Typical @ 300kHz	Lens Focal Length (mm)	163		
Max Pulse Energy (uJ)	10.0	Field Size (mm ²)	100 x 100		
Wavelength (nm)	355	Working Distance (mm)	216		
Pulse Duration (ns)	1.5	Spot Size (µm)	~ 30		
Pulse Repetition Rate (kHz)	2-300	AVAILABLE ACCESSORIES			
Scanner Head					
Tracking Delay (ms)	0.1			Remote Automation License Upgrade To be used when external communication is need	P40-020451
Repeatability (rms)	<5 µrad			Motion and I/O License Upgrade Needed for direct control of external Z axis and simple I/O automation	CEMISCX0000014PX
Mirror Clear Aperture (mm)	12			External Motion Interface Board Electrical interface for 5V motion controllers	P30-003779
Focal Length Option (mm)	100 170 254	24V Robot Interface Board Electrical Interface for 24 devices (robot, PLCs)	P30-003943		
Mounting Configurations	Horizontal				
Other Parameters					
Control	IPG Controller, XY2-100				
Weight (lbs)	16				



COMING SOON
Green Integrated Marker



Pico-Second Integrated Marker

- Shorter Pulse Width Ideal for Dark Marking Applications
- Completely Integrated and Sealed Unit
- Pre-calibrated Scan Field
- Integrated Beam Expander
- Integrated Guide Beam



Specifications

Laser	
Average Power (W)	50
Max Pulse Energy (uJ)	25
Wavelength (nm)	1030
Pulse Duration (ps)	<3, Typical 2 ps
Pulse Repetition Rate (kHz)	50-2000
Scan Head	
Tracking Delay (ms)	0.1
Repeatability (rms)	<5 μ rad
Mirror Clear Aperture (mm)	12
Focal Length Option (mm)	100 163 254 330 420
Mounting Configurations	Horizontal
Other Parameters	
Control	IPG Controller, XY2-100
Weight (lbs)	13.5



Configuration Example

Lens Focal Length (mm)	163
Field Size (mm ²)	100 x 100
Working Distance (mm)	189
Spot Size (μ m)	~ 30

AVAILABLE ACCESSORIES

Remote Automation License Upgrade To be used when external communication is need	P40-020451
Motion and I/O License Upgrade Needed for direct control of external Z-axis and simple I/O automation	CEMISCX0000014PX
External Motion Interface Board Electrical interface for 5V motion controllers	P30-003779
24V Robot Interface Board Electrical Interface for 24 devices (robot, PLCs)	P30-003943



COMING SOON
Femto-second Integrated Marker

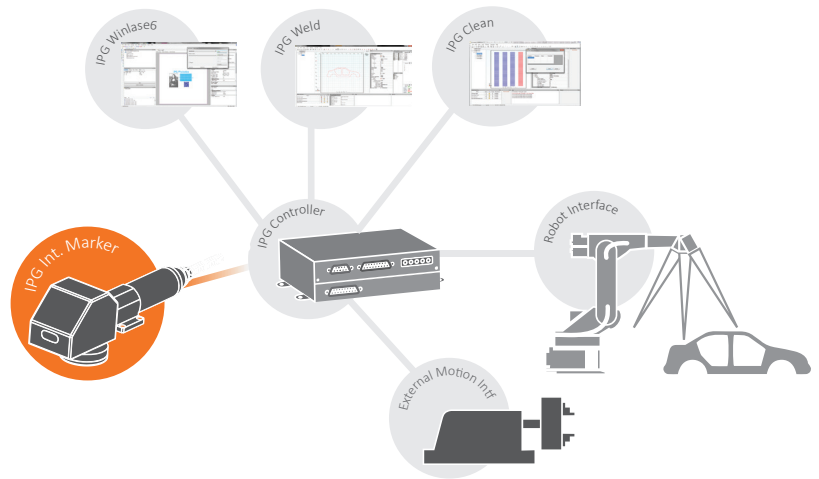
IPG Photonics Laser Marking Modules



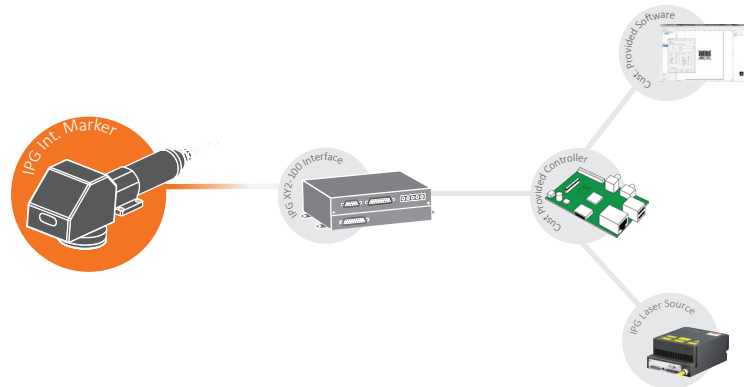
Architecture Options

IPG Integrated Markers are available with both the industry standard XY2-100 Controls Interface option and the fully integrated IPG Controller & Software option.

Option 1: IPG Controls & Software

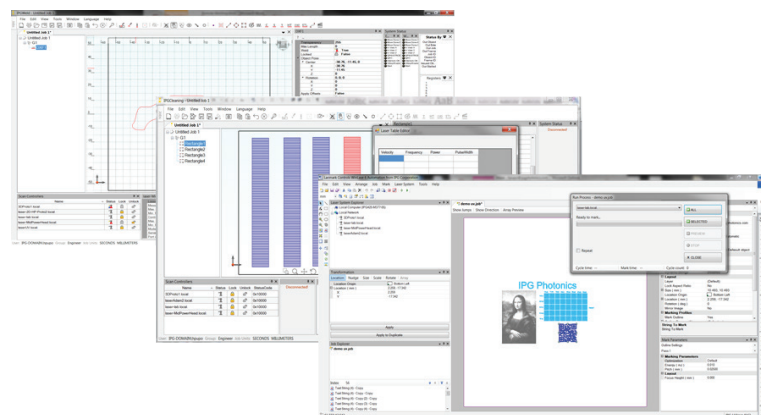


Option 2: External Controls & Software with XY2-100 Interface



Controls and Software

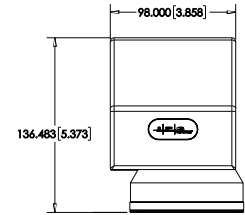
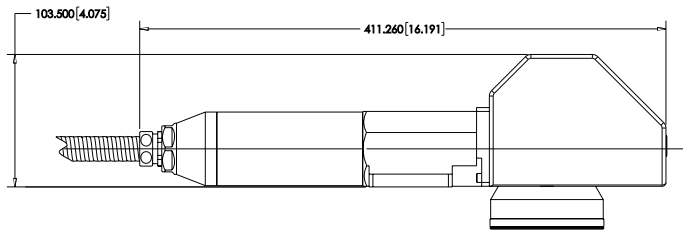
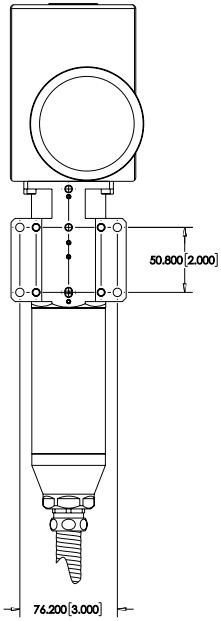
IPG Integrated Markers are available with a powerful, yet simple and easy to use marking software as well as an integrated controller which takes full advantage of the capabilities of the IPG pulsed laser sources. IPG Controllers are also available with the IPGWeld and the new IPGClean software packages for optimized application parameter controls. This makes IPG Integrated markers a versatile tool for both laser marking and laser surface cleaning/treatment applications. In addition, IPG Controller and Software platforms provide an optional interface to external motion controllers for both point-and-shoot and marking-on-the-fly applications.



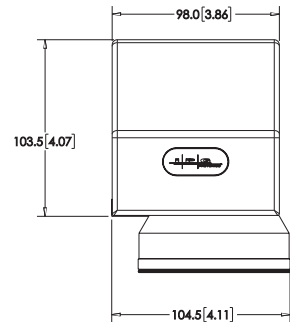
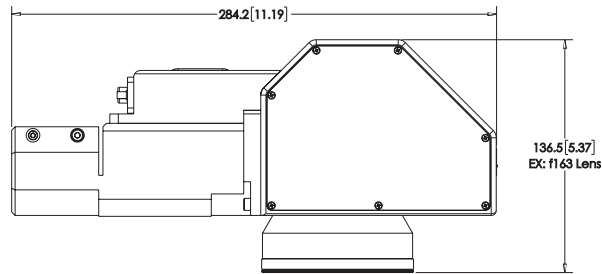
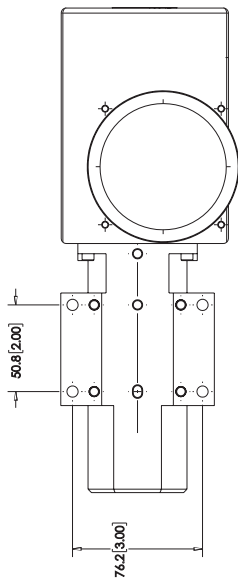


Outline Drawings

IR Integrated Marker Head



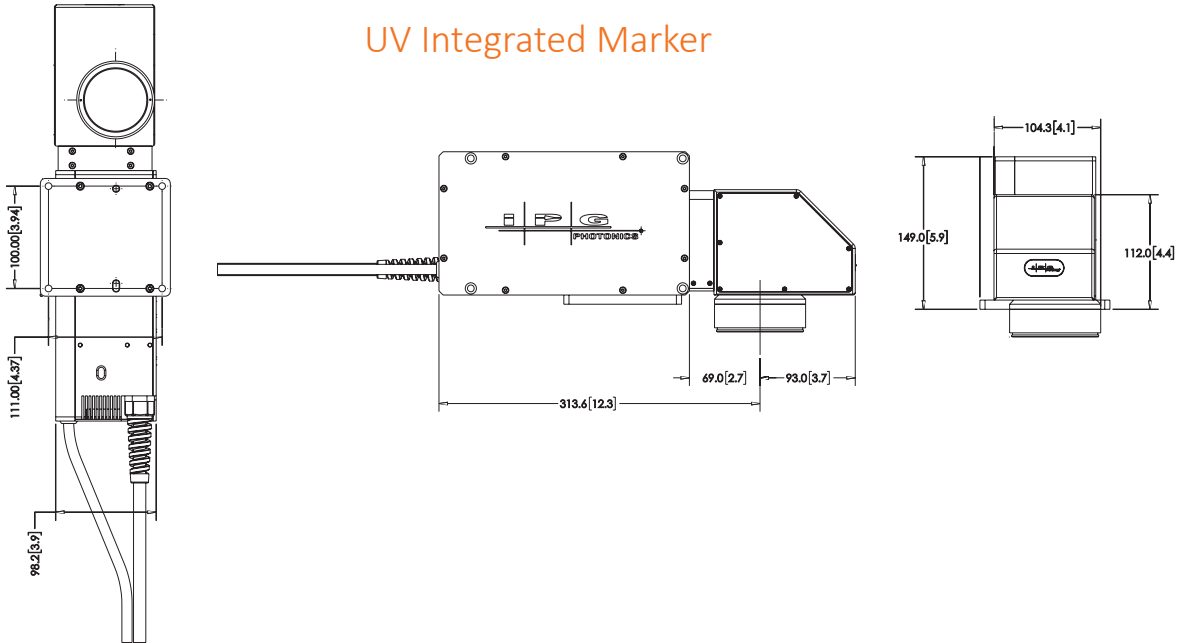
Collimator Input Head



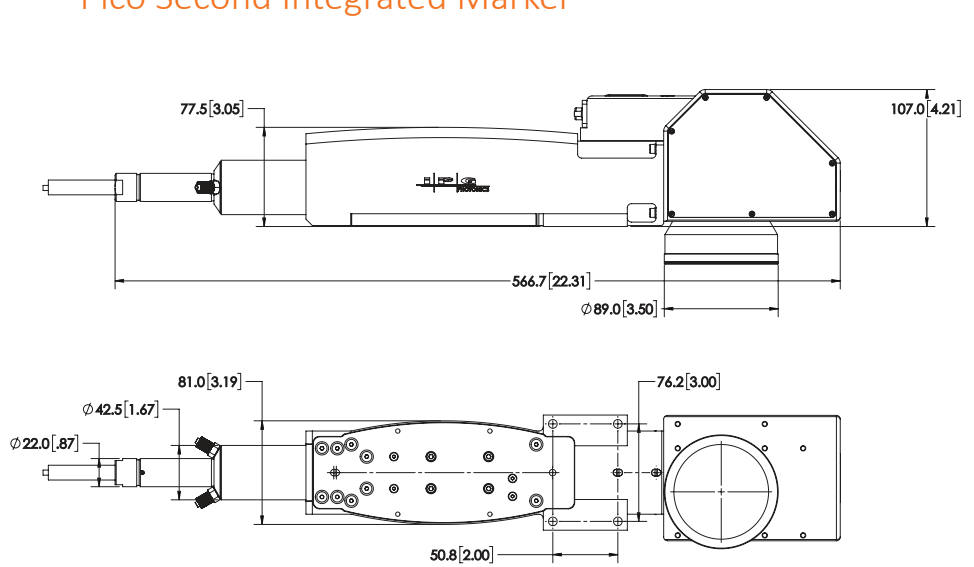


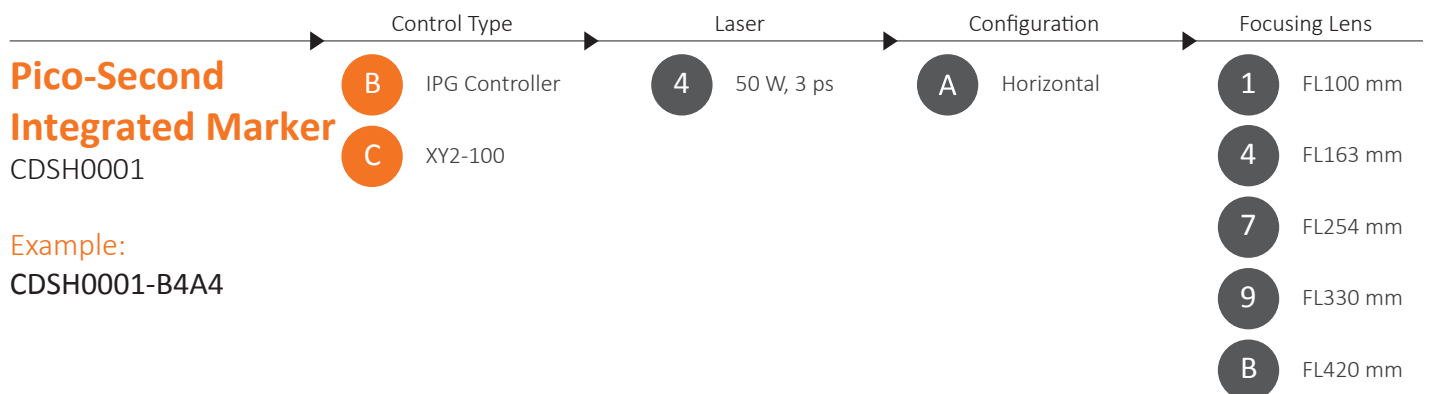
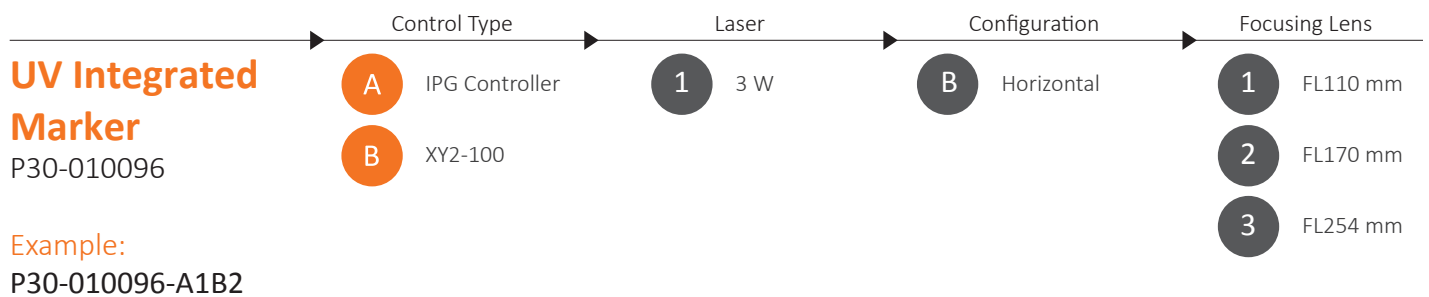
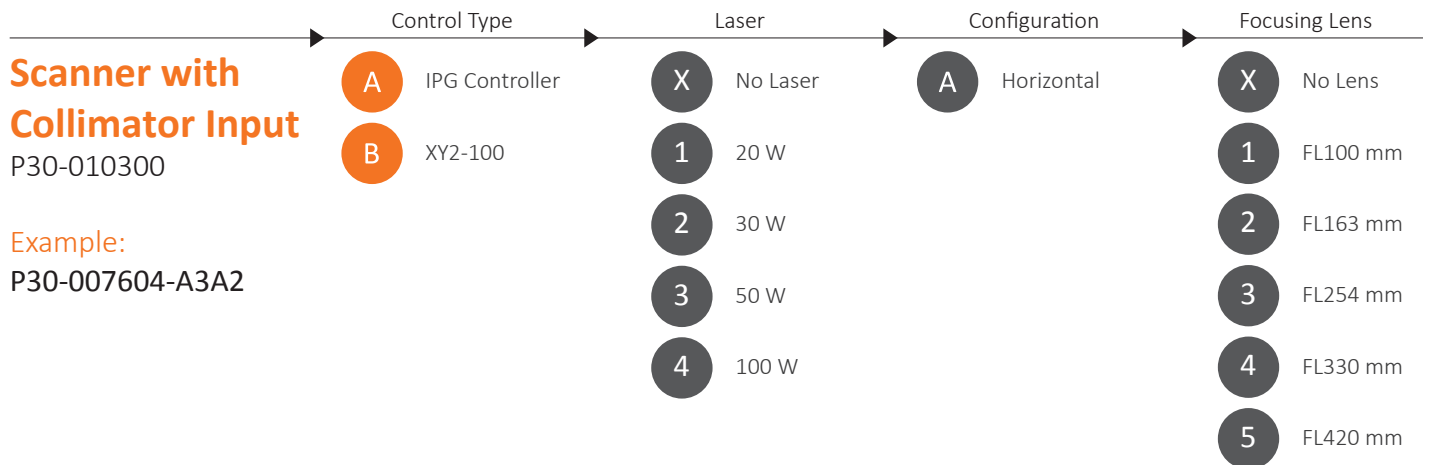
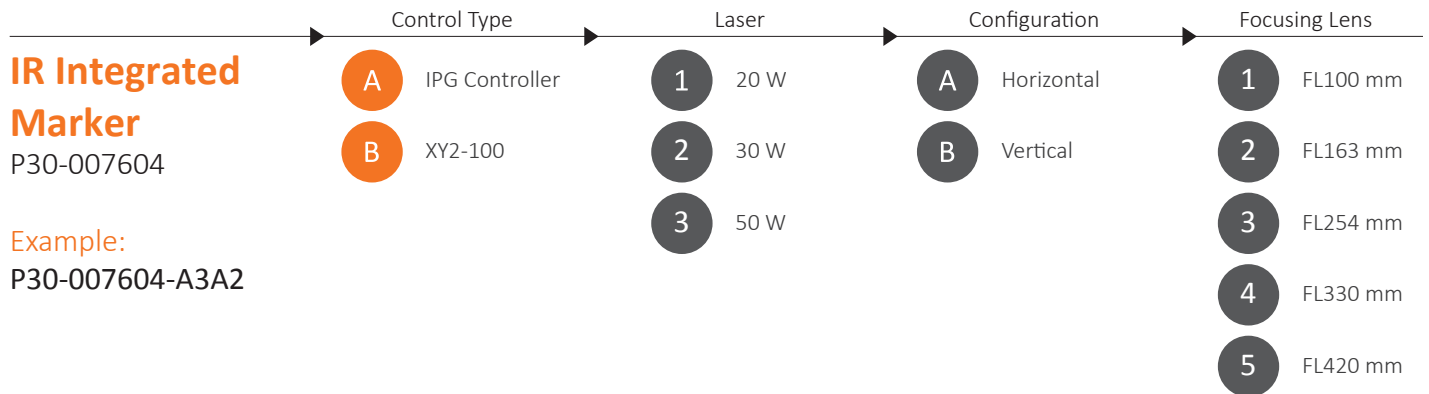
Outline Drawings

UV Integrated Marker



Pico Second Integrated Marker







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 Manufacturing, Development, Sales & Service ■

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IPG Photonics manufactures a wide range of laser products with laser classifications ranging from Class I to Class IV. Please review the individual product specification for the optical performance characteristics specific to the device. This information typically includes the wavelength range, output power (CW and/or Peak), Pulse Energy, Pulse Repetition Rate, Pulse Width, etc.

