



IPG LASER MARKING Modules



IPG Photonics Laser Marking Modules

IR Integrated Marker

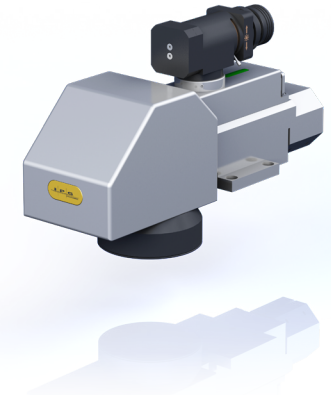
- Complete module for marking integrators and OEMs
- Compact and sealed package
- Available with IPG control Interface and industry standard XY2-100
- Versatile marking software with optional IPG scan controllers
- Pre-calibrated scan field
- Ethernet communication



Specifications		Configuration Example	
Laser			
Average Power, W	20, 30, 50	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	~ 40
Pulse Repetition Rate, kHz	2-200	Accessories	
Scan Head			
Tracking Delay, ms	0.1		
Repeatability, rms	<5 μrad		
Mirror Clear Aperture, mm	12	External Motion Interface Board	CMUS1001478XXXXU
Focal Length Option, mm	100, 163, 254, 330, 420	Electrical interface for 5V motion controllers	
Mounting Configurations	Horizontal Vertical		CDSBEM00001XXXXU
Other Parameters		24V Robot Interface Board	Electrical Interface for 24 devices (robot, PLCs)
Control	IPG Controller, XY2-100		
Weight (lbs)	9 (Process Head)		

IR Scanner with Collimator Input

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



Specifications		Configuration Example	
Laser			
Average Power, W	No Laser, 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	~ 40
Pulse Repetition Rate, kHz	2-200, 5-500 (for 100W)	Accessories	
Scan Head			
Tracking Delay, ms	0.1		
Repeatability, rms	<5 μrad		
Mirror Clear Aperture, mm	12	External Motion Interface Board	CMUS1001478XXXXU
Focal Length Option, mm	100, 163, 254, 330, 420	Electrical interface for 5V motion controllers	
Mounting Configurations	Horizontal Vertical		CDSBEM00001XXXXU
Other Parameters		24V Robot Interface Board	Electrical Interface for 24 devices (robot, PLCs)
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, 6 – Typical @ 300kHz	Lens Focal Length, mm	170
Max Pulse Energy, μ J	Up to 20	Field Size, mm ²	110 x 110
Wavelength, nm	355	Working Distance, mm	216
Pulse Duration, ns	1.5	Spot Size, μ m	~ 30
Pulse Repetition Rate, kHz	10-300, 100-1000	Accessories	
Scan Head		External Motion Interface Board CMUS1001478XXXU	
Tracking Delay, ms	<0.1	Electrical interface for 5V motion controllers	
Repeatability, rms	<5 μ rad	24V Robot Interface Board CDSBEM00001XXXU	
Mirror Clear Aperture, mm	9, 12	Electrical Interface for 24 devices (robot, PLCs)	
Focal Length Option, mm	100, 170, 250		
Mounting Configurations	Horizontal		
Other Parameters			
Control	IPG Controller, XY2-100		
Weight (lbs)	16		

Picosecond 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		Configuration Example	
Laser			
Average Power, W	50	Lens Focal Length, mm	163
Max Pulse Energy, μ J	25	Field Size, mm ²	110 x 110
Wavelength, nm	1030	Working Distance, mm	189
Pulse Duration, ps	<3, Typical 2 ps	Spot Size, μ m	~ 30
Pulse Repetition Rate, kHz	50-2750	Accessories	
Scan Head		External Motion Interface Board CMUS1001478XXXU	
Tracking Delay, ms	0.1	Electrical interface for 5V motion controllers	
Repeatability, rms	<5 μ rad	24V Robot Interface Board CDSBEM00001XXXU	
Mirror Clear Aperture, mm	12	Electrical Interface for 24 devices (robot, PLCs)	
Focal Length Option, mm	100, 163, 254, 330, 420		
Mounting Configurations	Horizontal		
Other Parameters			
Control	IPG Controller, XY2-100		
Weight, lbs	13.5		

IPG Photonics Laser Marking Modules

Green Integrated Scanner

- Complete module with laser and scanner
- 515 nm wavelength Ideal for broad range of applications
- Compact and air cooled
- Pre-calibrated scan field
- Available with IPG control interface and industry standard XY2-100

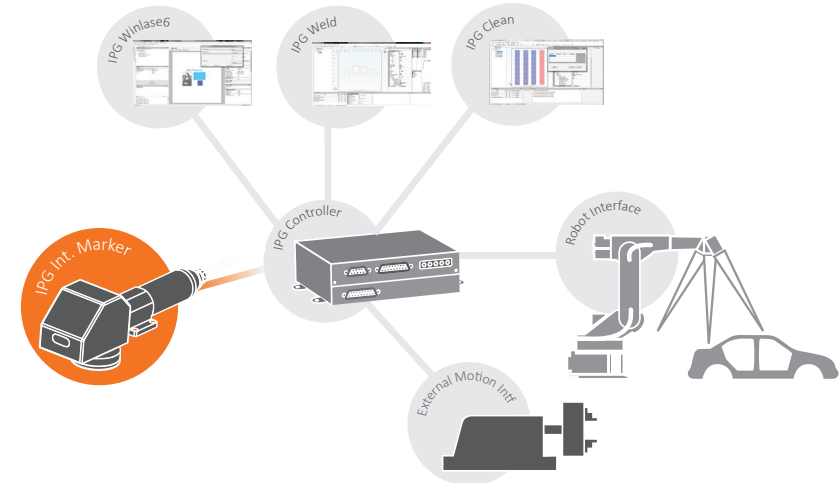


Specifications		Configuration Example	
Laser			
Average Power, W	50	Lens Focal Length, mm	165
Max Pulse Energy, μ J	50-500 (selectable)	Field Size, mm ²	110 x 110
Wavelength, nm	515	Working Distance, mm	188
Pulse Duration, ns	1.5-10 (selectable)	Spot Size, μ m	~ 25
Pulse Repetition Rate, kHz	10-1000		
Scan Head		Accessories	
Tracking Delay, ms	0.1	External Motion Interface Board	CMUS1001478XXXXU
Repeatability, rms	<5 μ rad	Electrical interface for 5V motion controllers	
Mirror Clear Aperture, mm	12	24V Robot Interface Board	CDSBEM00001XXXXU
Focal Length Option, mm	165	Electrical Interface for 24 devices (robot, PLCs)	
Other Parameters			
Control	IPG Controller, XY2-100		
Weight, lbs	16		

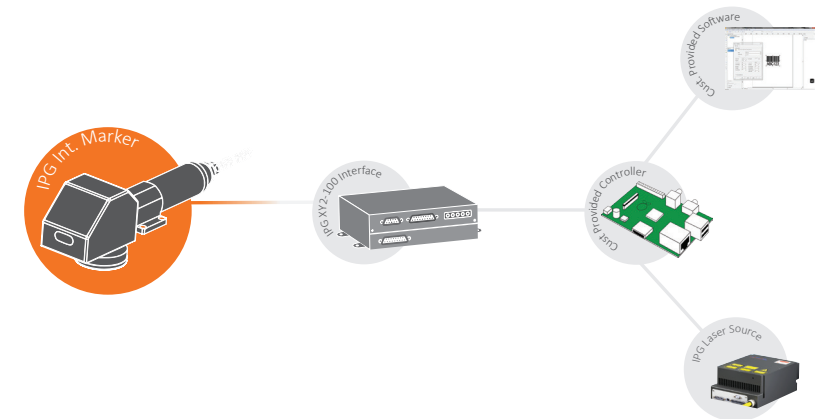
Architecture Options

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



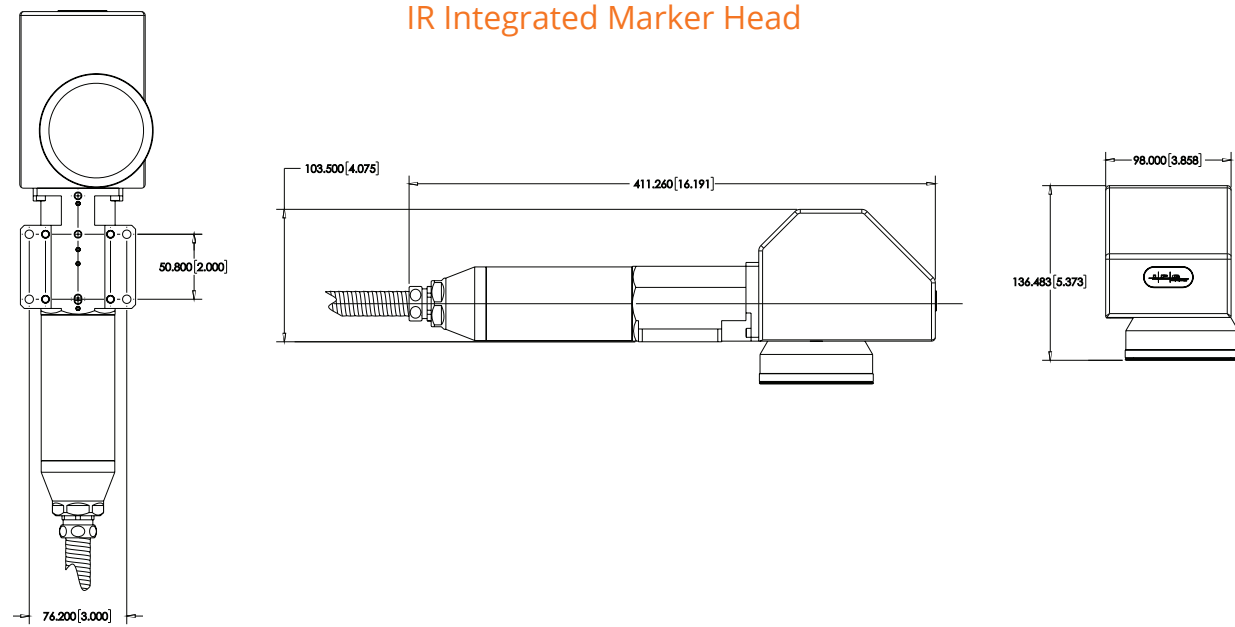
Option 2: External Controls & Software with XY2-100 Interface



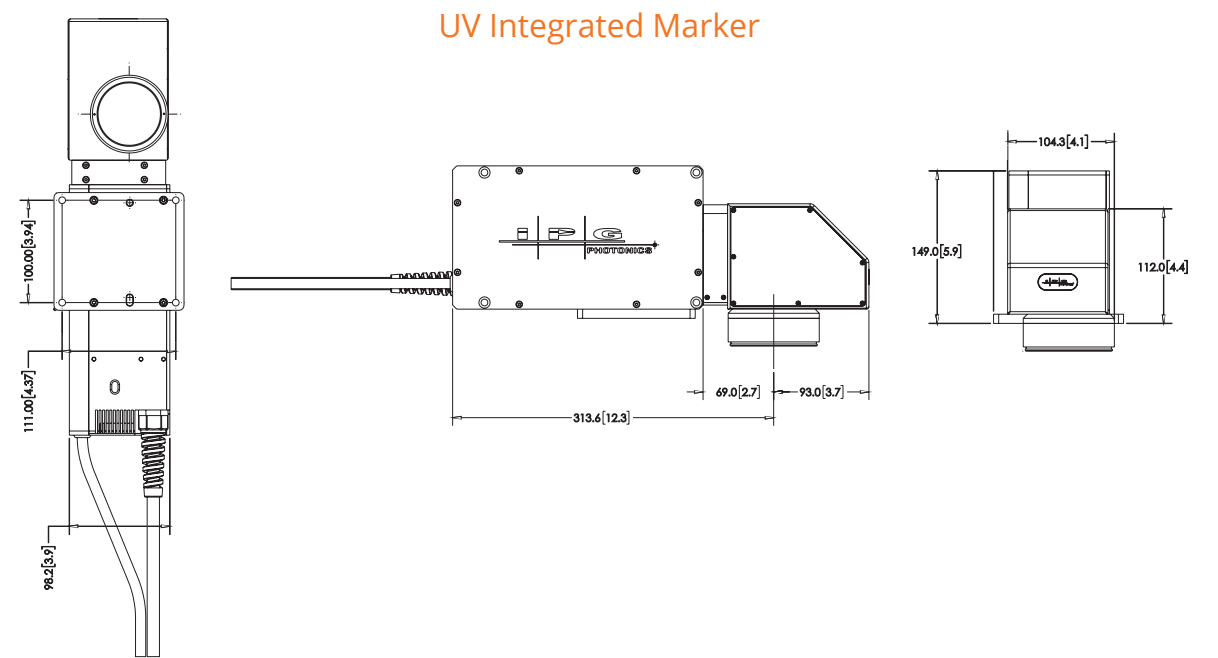
Architecture Options

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 as well as interfaces with PLCs and other process controllers.

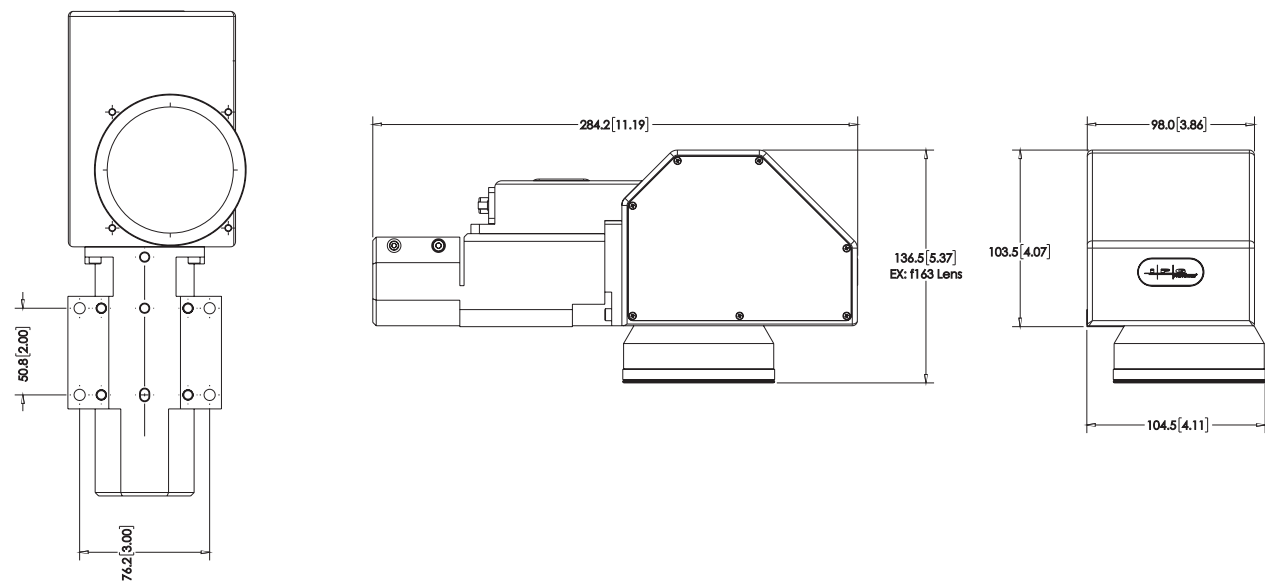
 Outline Drawings



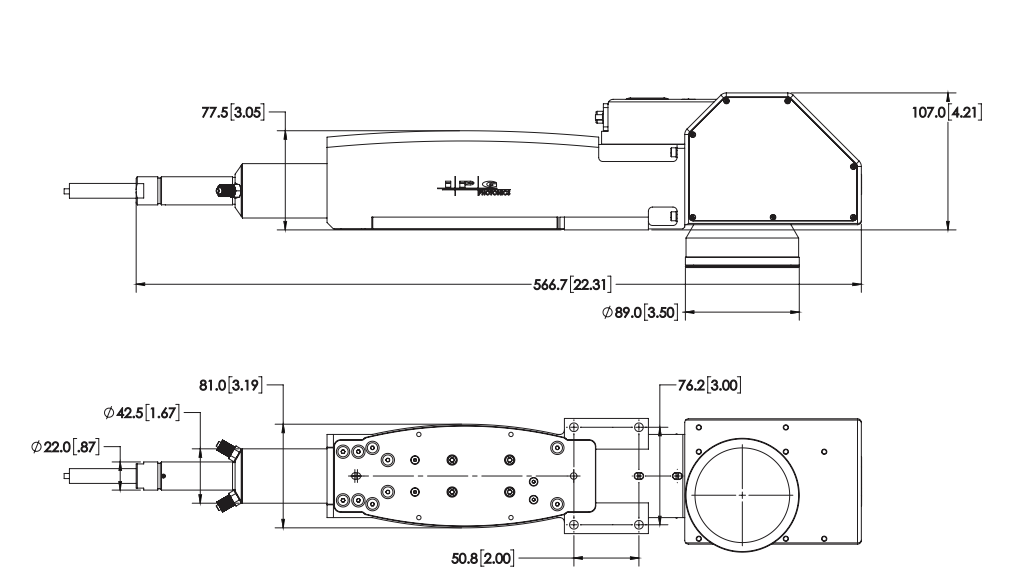
 Outline Drawings



Collimator Input Head



Picosecond and Green Markers



Configuration

	Control Type	Laser	Configuration	Focusing Lens
IR Integrated Marker P30-007604	A IPG Controller	1 20 W	A Horizontal	1 FL100 mm
	B XY2100	2 30 W	B Vertical	2 FL163 mm
Example: P30-007604-A3A2		3 50 W		3 FL254 mm
				3 FL330 mm
				3 FL420 mm

	Control Type	Laser	Configuration	Focusing Lens
Scanner with Collimator Input P30-010300	A IPG Controller	X No Laser	A Horizontal	X No Lens
	B XY2100	1 20 W		1 FL100 mm
Example: P30-010300-A4A2		2 30 W		2 FL163 mm
		3 50 W		3 FL254 mm
		4 100 W		4 FL330 mm
				5 FL420 mm
				6 FL160 mm FS
			7 FL254 mm FS	

	Control Type	Laser	Configuration	Focusing Lens
UV Integrated Marker P30-010096	A IPG Controller	1 3 W	B Horizontal	1 FL110 mm
	B XY2100			2 FL170 mm
Example: P30-010096-A1B2				3 FL254 mm

Configuration

	Control Type	Laser	Configuration	Focusing Lens
Picosecond Integrated Marker CDSH0001	B IPG Controller	4 50 W, 3 ps	A Horizontal	1 FL100 mm
	C XY2100			4 FL163 mm
Example: CDSH0001B4A4XXXU				7 FL254 mm
				9 FL330 mm
				B FL420 mm

	Collimator Focus	Fiber Receiver	Reserved	Country of Origin
	X Not Specified	X Not Specified	X Not Specified	U USA

	Control Type	Laser	Configuration	Focusing Lens
Green Integrated Scanner CDSH0005	A IPG Cont. Type E	4 50 W	A Horizontal	D 165
	C XY2-100			X Not Specified
Example: CDSH0005A4ADXXXU				

	Collimator Focus	Fiber Receiver	Reserved	Country of Origin
	X Not Specified	X Not Specified	X Not Specified	U USA

Green Integrated Scanner
CDSH0005
(Continued)
Example:
CDSH0005A4ADXXXU



■ Sales & Service
■ Development, Sales & Service
■ Manufacturing, Development, Sales & Service

IPG Photonics Corporation

World Headquarters
 Oxford, MA USA
 +1 508 373 1100
 sales.us@ipgphotonics.com

IPG Laser GmbH

European Headquarters
 Burbach, DE
 +49 2736 44200
 sales.europe@ipgphotonics.com

IRE-Polus Co.

IPG Russia
 Fryazino, Moscow RU
 +7 (495) 702 95 89
 mail@ntoire-polus.ru

Brazil
 +55 11 4380 9939
 sales.br@ipgphotonics.com

China
 +86 10 6787 3377 ext. 1020
 sales@ipgbeijing.com

Czech Republic
 +420 241 433 199
 sales.cz-sk@ipgphotonics.com

France
 +33 (0) 388 674 974
 sales.france@ipgphotonics.com

India
 +91 956 060 8808
 sales.india@ipgphotonics.com

Italy
 +39 0331 170 6900
 sales.italy@ipgphotonics.com

Japan
 +81 45 716 9831
 info@ipgphotonics.co.jp

Mexico
 +52 81 1354 2540
 ipgmexico@ipgphotonics.com

Poland
 +48 32 721 22 20
 sales.poland@ipgphotonics.com

Singapore
 +65.667.87709
 sales.singapore@ipgphotonics.com

South Korea
 +82 42 930 2000
 ipgk@ipgphotonics.com

Spain & Portugal
 +34 937 999 971
 sales.spain@ipgphotonics.com

Taiwan
 +886 2 27 93 3582
 ahung@ipgphotonics.com

Turkey
 +90 216 306 0317
 sales.turkey@ipgphotonics.com

United Kingdom & Ireland
 +44 0 117 203 4060
 sales.uk@ipgphotonics.com

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.

