

IPG Photonics Cladding Head

from the World Leader in Fiber Lasers



Applications



Features



Advantages



www.ipgphotonics.com

■ The Power to Transform®

IPGClad D50 - Cladding Head

IPG Photonics' Process Heads



Standard Features

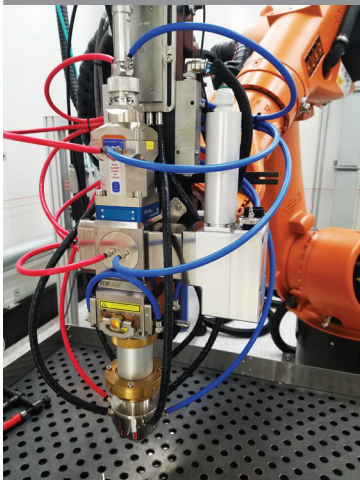
IPG Cladding Heads are designed to provide various deposition rates at various laser powers with integrated Fraunhofer Coax 8 Powder Nozzle in a completely sealed package. IPG Cladding Heads provide effortless integration with IPG lasers up to 10kW power level. Available in multiple configurations with the broadest focus and collimator lens options as well as various beam shaper options. IPG Cladding Heads are the ultimate tool to clad a multitude of different material types at high deposition rates for additive manufacturing applications.



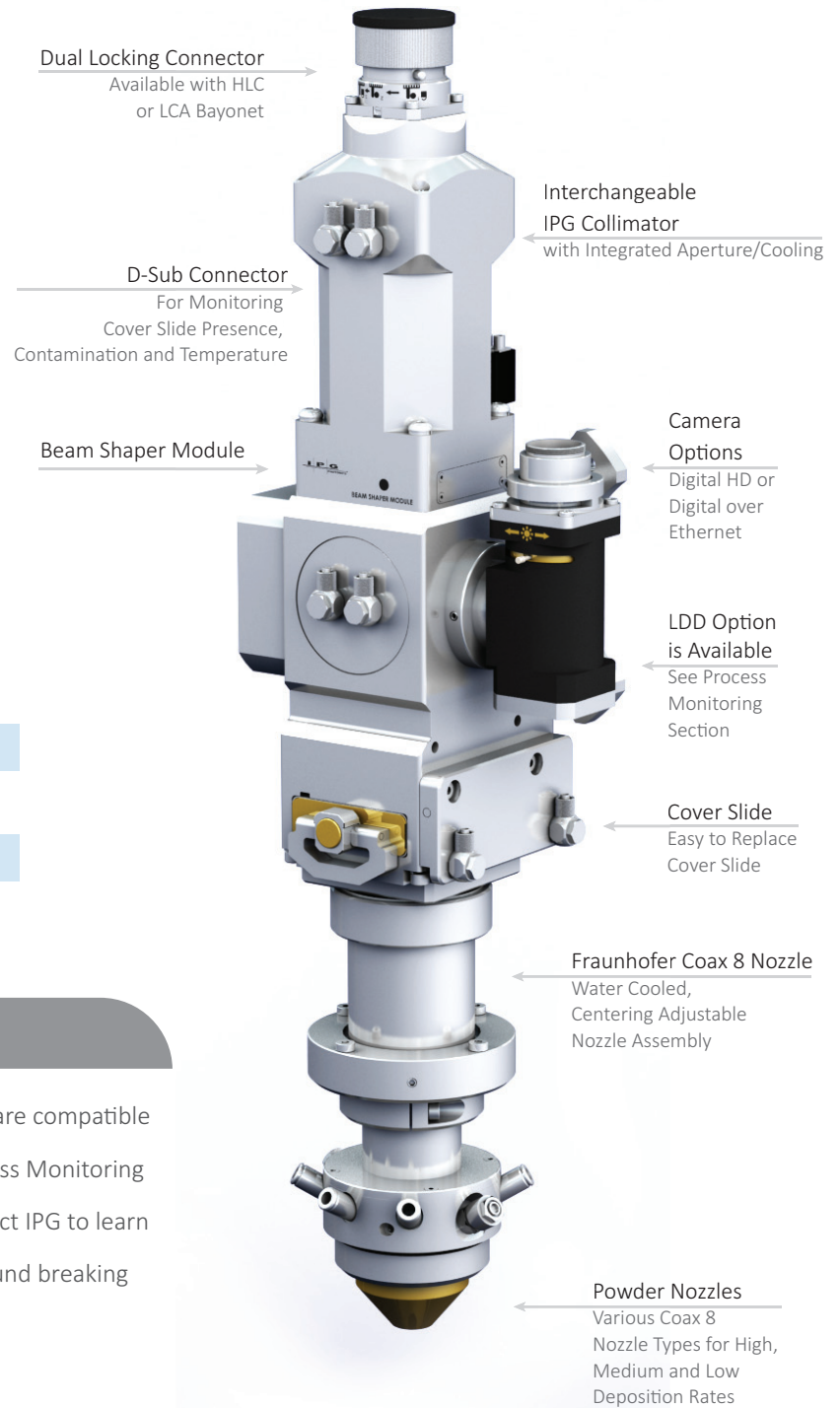
Specifications

| | |
|------------------------|-----------------|
| Laser Power | Up to 10kW |
| Deposition Track Width | 2 mm to 10 mm |
| Powder Feed Rate | 10 to 150 g/min |
| Tilt Angle | 30° |

PROCESS MONITORING



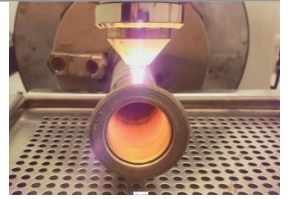
IPG Cladding Heads are compatible with IPG's LDD Process Monitoring system. Please contact IPG to learn more about this ground breaking technology.



CLADDING HEAD ACCESSORIES

Beam Shaper Module

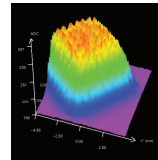
- Installed between the Collimator and Core Block Assembly
- Rated up to 10kW
- Uniform (Flat-top) Power Distribution over the Area
- Square or Circular Beam Shape
- Long Rayleigh Length



AVAILABLE BEAM SHAPER CONFIGURATIONS

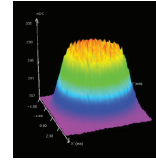
| Focusing Lens | -CIR (Spot Size) | -SQR (Spot Size) |
|---------------|------------------|------------------|
| F250 | 5 mm | 5 mm |
| F300 | 6 mm | 6 mm |
| F400 | 8 mm | 8 mm |

F300 with Square Shaper



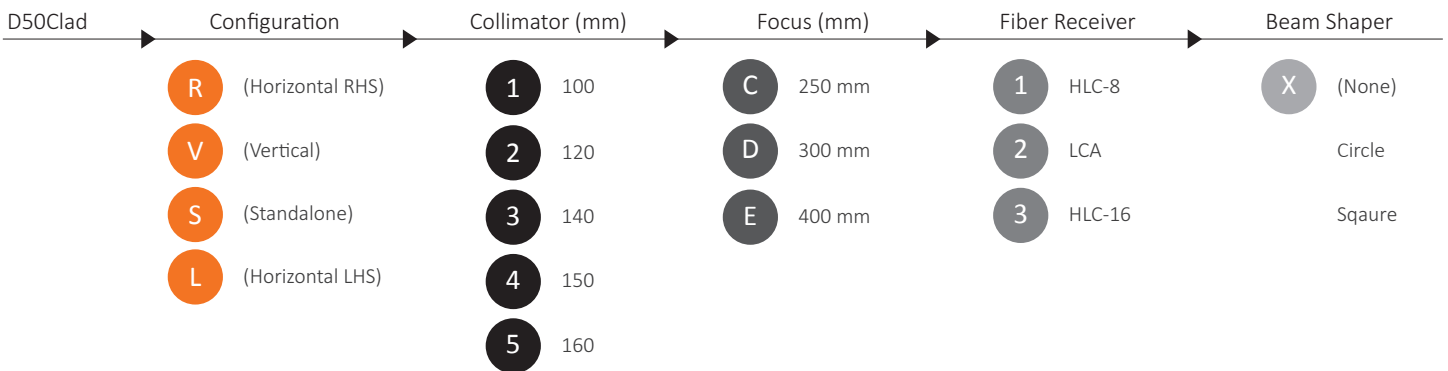
6mm x 6mm
Square Output:
P30-003444-SQR

F300 with Circular Shaper



6mm Circular
Output:
P30-003444-CIR

Optical Configurations



Coax 8 Powder Nozzles

| Description | | Outer Nozzles Part Numbers | Inner Nozzles Part Numbers |
|---------------------------------------|----------|----------------------------|----------------------------|
| Standard, 10 mm Orifice | Standard | CMTNACC0000004PX | CMTNACC0000000PX |
| Low Volume Deposition, 4 mm Orifice | Optional | CMTNACC0000005PX | CMTNACC0000001PX |
| Low Volume Deposition, 6 mm Orifice | Optional | CMTNACC0000006PX | CMTNACC0000002PX |
| High Volume Deposition, 14 mm Orifice | Optional | CMTNACC0000007PX | CMTNACC0000003PX |

Accessories

| | | | | | |
|---|--|---|--|---|--|
|  | Coax 8 Heat Shield CMMIACX0000000PX |  | Coax 8 Heat Shield, Water Cooled CMMIWCX0000000PX |  | HD Camera Package P30-007443 |
|  | Camera Arm Module P30-002424 (90 Degree) P30-009929 (Straight) |  | Powder Splitter Manifold, 1 Inlet/4 Outlet CMMIACC0000014PX |  | Ethernet Camera Package P30-007444 |
|  | Rotary Mount P30-009979 (R, V, L) P30-009979-001 (S) |  | Powder Splitter Manifold, 2 Inlet/4 Outlet CMMIACC0000024PX |  | USB Camera P40-007470 |
|  | WHAM (Welding Head Alarm Module) P30-007325 | | |  | SDI Camera Package CDSBEM000012XXXU |

*** Please Contact IPG
for Other Options.**



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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.

