

MiniLase Plus

Industrial Laser Modules

Preliminary Specifications

Medical Instruments
Machine Vision
Alignment & Targeting
Manufacturing
Instrumentation
Life Sciences
3D Imaging
Sorting & Inspection



MiniLase Plus is a new member of MiniLase family from Blue Sky Research. This compact high-performance laser is designed specifically for application in the demanding operation environments. Based on proprietary technologies and decades of production experience of laser modules, the new MiniLase Plus combine Blue Sky Research's VPS (virtual point source) lasers with high quality optics and integrated laser drive electronics.

Key Features

MiniLase Plus

- Water and dust proof: optical window, electrical connection and housing designed to IP67 rating.
- New integrated drive electronics included, 405nm – 980nm
 - Integrated ESD protection
 - External modulation, up to 100kHz
 - Variable power adjustment

MiniLase Plus and MiniLase

- Superior beam quality: $M^2 < 1.3$
- Collimated, focused or shaped beam output.
- Compact

Wavelength & Power Options

Wavelength (nm)	Diode Power (mW)								
405	20	40							
450	60	80							
488	50								
520	40	65							
633	80								
638	1	5	10	15	25	85			
655/660	1	5	30	40	100				
670	1	5	10						
690	30	45							
785	1	5	10	20	80	100			
808	120								
830	40	160							
850	1	5	10	40	160				
905/915	8	80	240						
980	40	240							

Optical Specifications

Parameter	Specification	Comments
Spectral Line width	<0.5nm typical	Will vary with individual laser diode
Beam Size (Collimated)	1.0, 1.5, 2.5, 4.0 mm	Choose one of them for the application
Beam Aspect Ratio	≤1.25	Typical, selected VPSL approaches 1:1
Polarization	≥100:1 Typical	Proportional to increasing power
Power Stability	1hr, <1%	At stable temperature
Beam Diameter Tolerance	+/- 25%	Beam size is the diameter measured at 1/e ² max power level at the exit aperture of module
M ² Value	≤1.3	Typical, will vary with individual laser diode
Beam Pointing Stability	≤50μrad	@ 25°C, 8hrs
Beam Pointing accuracy	≤25mrad	@ 25°C
Centricity	≤0.25mm	typical

MiniLase Plus customized focusing optics enable a precise match to your system requirements: beam size, shape and waist location.

Mechanical Specifications

