

405nm Low Noise Laser

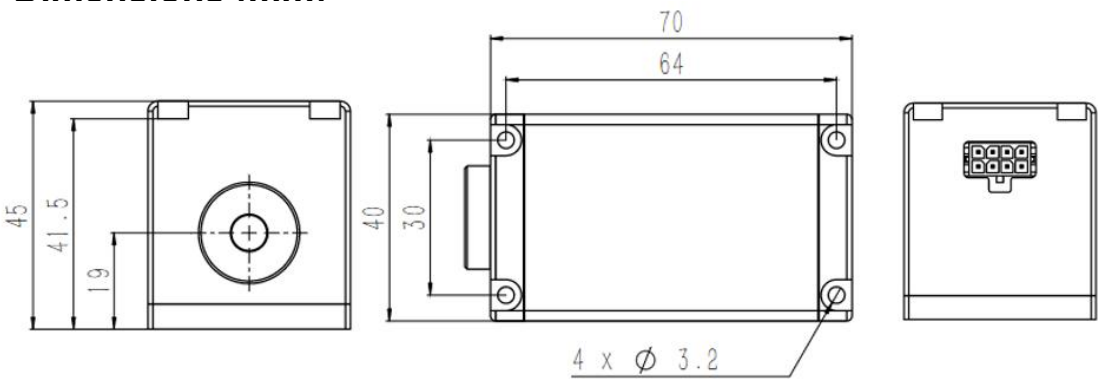


B405D080-70x40x45-V2

Applications

- . Flow cytometer
- . Hematology analyzer
- . DNA sequencing
- . Semicoductor Testing

Dimensions (mm)



Specifications			
Model Number	B405D080-70x40x45-V2		
Mechanical Specifications	Min	Typ	Max
Width x Height (mm)	-	40x45	-
Length (mm)	-	70	-
Weight (g)	-	-	200
Housing Material	Grey Anodized Aluminum		
Optical Specificaitons	Min	Typ	Max
Wavelength (nm)	402	405	408
Bandwidth (nm)	-	2	-
Output Power (mW)	0	-	80
RMS Power Stability (25°C, 8h)	-	-	1%
RMS Noise (10Hz-2MHz, 5s)	-	-	0.1%
Output Power Mode	CW		
Laser Class	3b		

Polarization Extinction Ratio (dB)		20	-	-
Polarization Orientation (Vertical)		-3°	-	3°
Beam Specifications		Min	Typ	Max
Beam Divergence ⁽¹⁾	Horizontal (mrad)	-	0.3	-
	Vertical (mrad)	-	0.5	-
Beam Dimensions ⁽²⁾	Horizontal (mm)	2.5	3.0	3.5
	Vertical (mm)	1.0	1.3	1.6
M ²		-	1.3	-
Beam Alignment Off-axis Angle (mrad) ⁽¹⁾		-	-	2.5
Beam Pointing Stability (urad/°C)		-	-	5
Beam Height from Base Plate (mm)		-	19	-
Electrical Specifications		Min	Typ	Max
Operating Voltage (V)		DC12V		
Operating Current (A)		-	2	-
Power Type		APC		
Output Power Control		Master Computer Control ⁽³⁾		
Power Supply to Laser Driver Connection		8-hole Direct Plug (Terminal can be customized)		
Reliability		Min	Typ	Max
Environmental Temperature (°C)		15	25	40
Warm-up Time (minutes)		-	-	2
Storage Temperature (°C)		-20	-	60
Environmental Humidity (RH, %)		10	-	90
Lifetime (h) (MTTF at 25°C)		5,000	-	10000

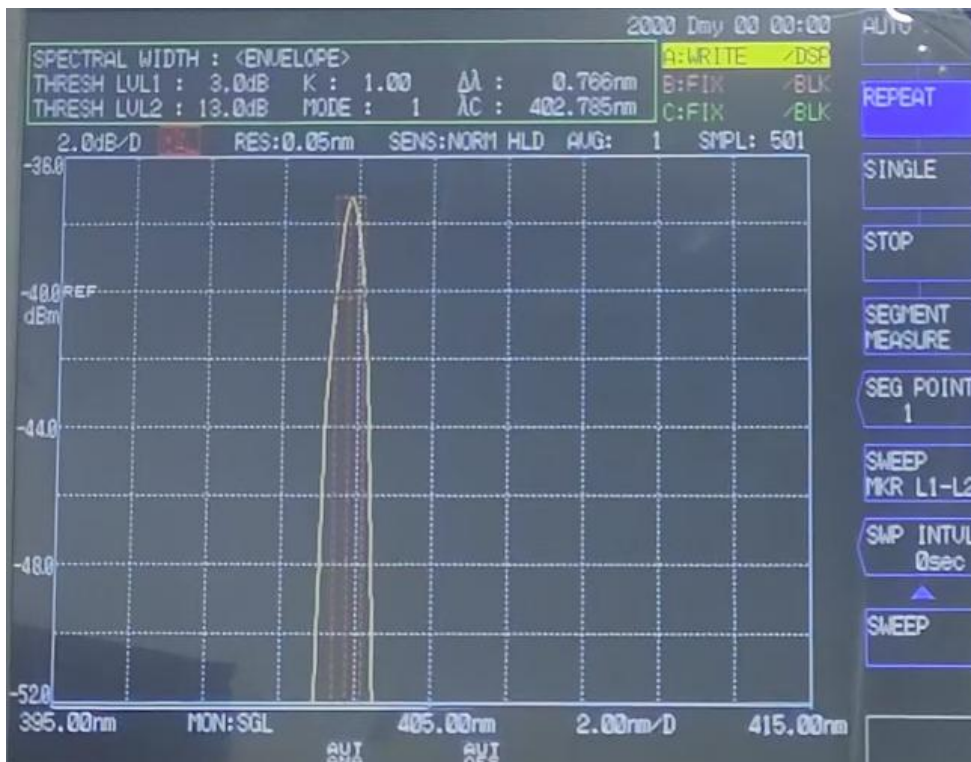
⁽¹⁾ Full Angle (1/e²)

⁽²⁾ at Working Distance 300mm (1/e²)

⁽³⁾ Communication protocols is required for this control, as it is customized according to our one customer's requirement.

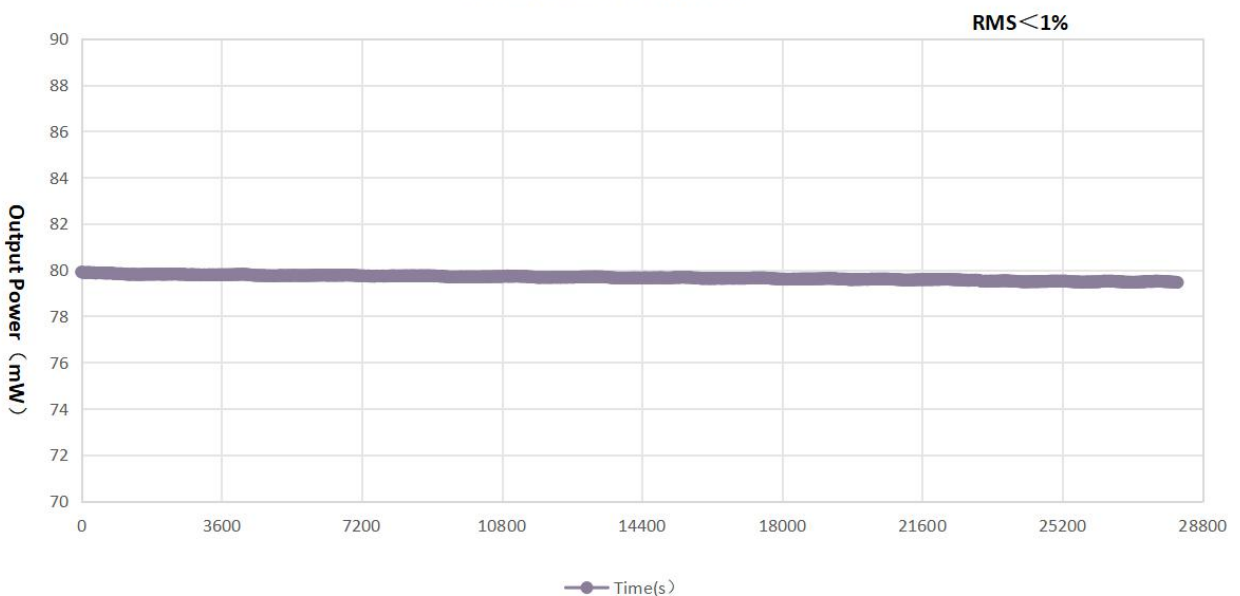
Typical Output Performance (examples)

1) Wavelength Test



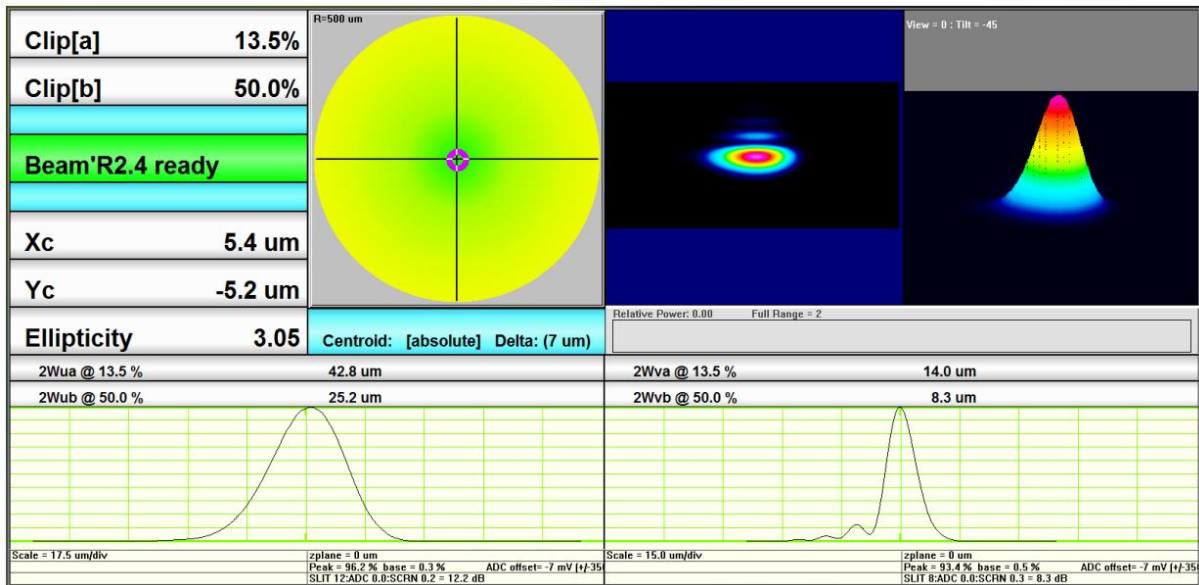
2) Power Stability Test

8h Power Stability Test



Typical Output Performance (examples)

3) Beam Test



4) Pointing Stability (beam center of Mass change according to tempearture)

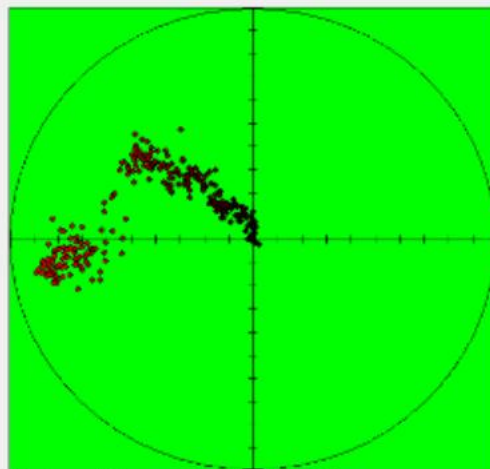
Test Device: Dateray CCD

Test Temperature: 25°C~50°C

Test Distance: 0.5m

Test Result:

Z=RMS Change in Center of Mass/test distance/temperature range=42.78/0.5/25=3.42urad/°C



Darker points correspond to older data

Scale radius = 80 um

Samples taken = 285

Max deviation = 72.2 um

Last deviation = 69.4 um

Mean = 37.1 um

RMS = 42.78 um (x=39.39 um y=16.71 um)