B488D50-V00

Applications

. Fluorescence microscope

. Hematology analyzer

Specifications				
Product Model	**B488D50-V00**			
Mechanical Specifications	***Conditions***	***Min***	***Typ***	***Max***
Width x Height (mm) (1)		-	-	40x40
Length (mm)		-	-	100
Shutter	Manual Operation			
Heat Dissipation	Through Bottom Surface			
Housing Material	Grey Anodized Aluminum			
Optical Specificaitons	***Conditions***	***Min***	***Typ***	***Max***
Wavelength (nm)	P=50mW	483	488	493
Linewidth (nm)		-	-	2
Maximum Output Power (mW)	Adjustable	0	-	50
RMS Power Stability	ΔT±3℃, 8h	-	-	±5%
Optical Noise (RMS)	20Hz-20MHz	-	-	0.2%
Output Power Mode		CW		
Polarization Extinction Ratio		20dB	-	-
Polarization Orientation	Linear, vertical	-5°	-	+5°
Others	See page 4			

(1) See the dimentions drawing in page 3

(2) Optional 488nm +/-2nm

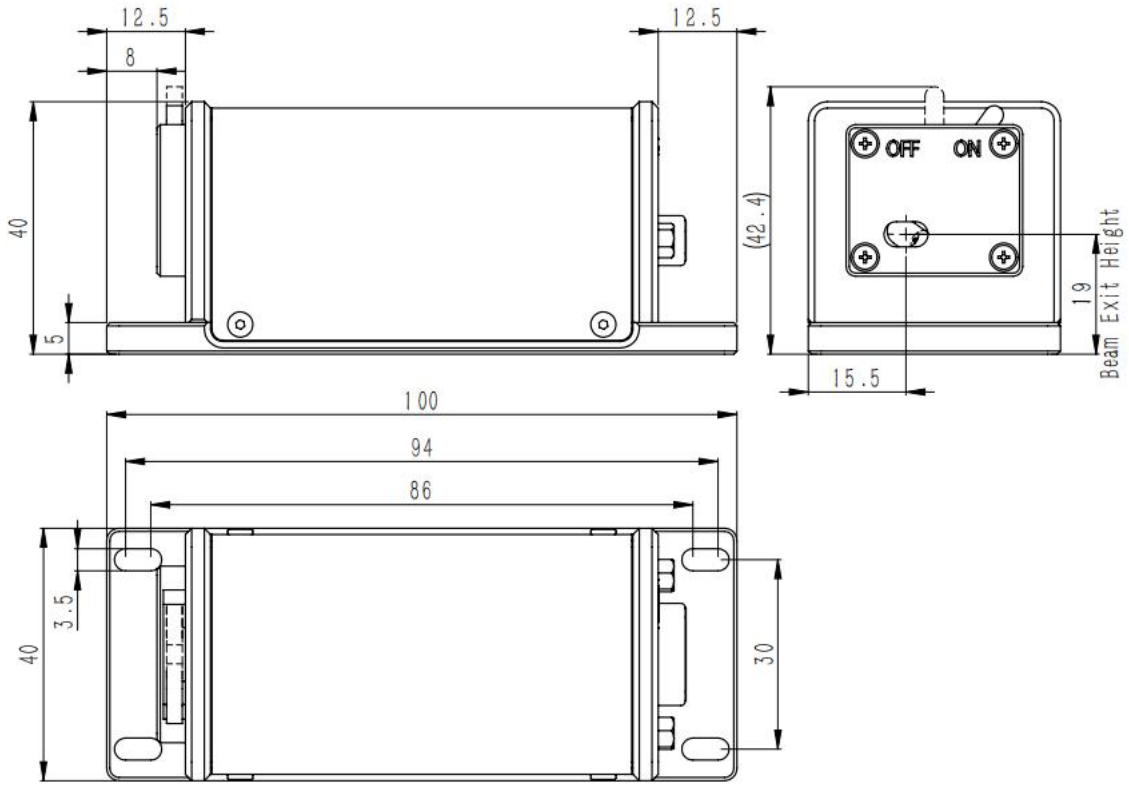
Beam Specifications	***Conditions***	***Min***	***Typ***	***Max***
Beam Divergence (mrad) (1)	in far field,1/e^2	-	-	1.6
Beam Diameter (mm) (2)	1/e^2	-	-	0.9
Beam Circularity (2)		90%	-	-
M^2	TEM_{00}	-	1.3	-
Beam Exit Height (mm) (3)		18.5	19	19.5
Beam Position from Left Side (mm) (3)		15	15.5	16
Electrical Specificaitons	***Conditions***	***Min***	***Typ***	***Max***
Operating Voltage (DC, V) (4)	DC	5	-	12
Max Power consumption (W)		-	-	10
Power Control Type	CW Mode	ACC		
Interface	RS-232, USB			
Connectors	Sub D15, μUSB	see page 6		
Environmental & Reliability	***Conditions***	***Min***	***Typ***	***Max***
Laser Head Baseplate Temperature (Max, ℃)		10	-	48
Environmental Humidity (RH, %)	Non-condensing	5	-	90
Warm-up Time (minutes) (5)		-	-	2
Storage Temperature (℃)		0	-	60
Lifetime - Operating (hours)		-	10000	-

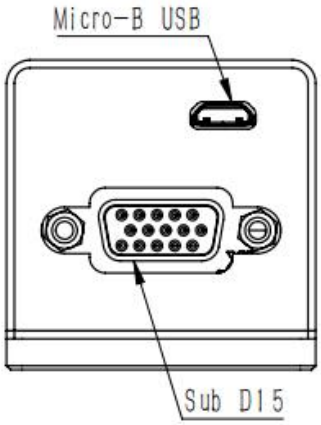
(1) Full Angle

(2) 50mm from aperture

(3) See mechanical drawings for exit beam location in page 3

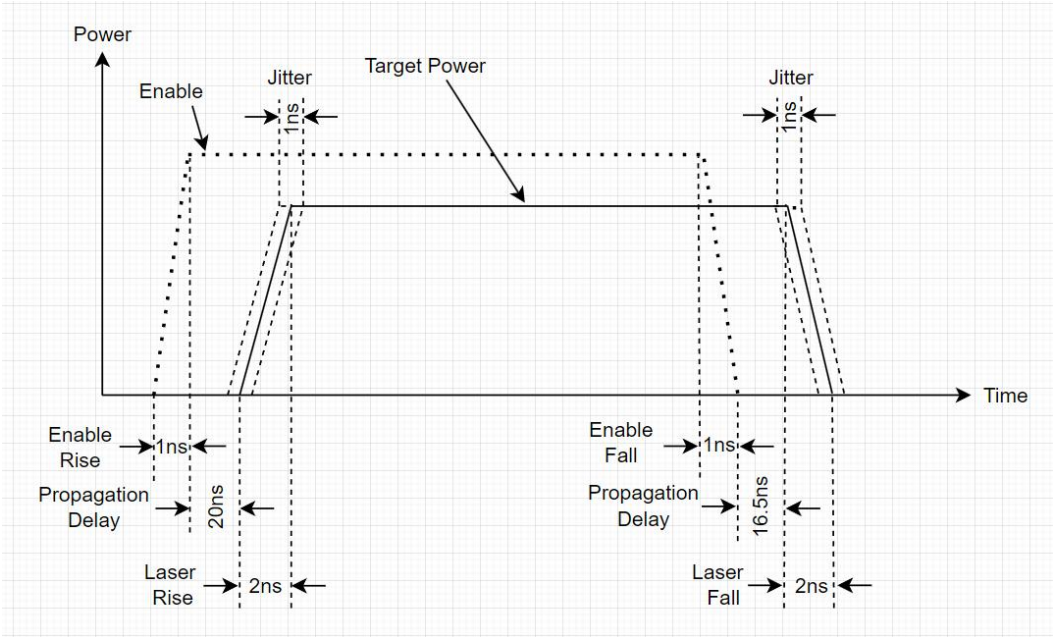
Mechanical Specifications



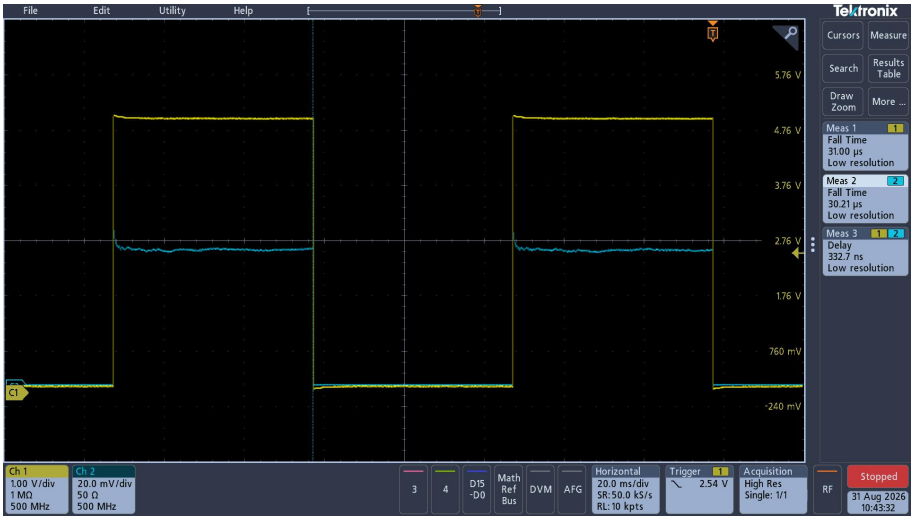


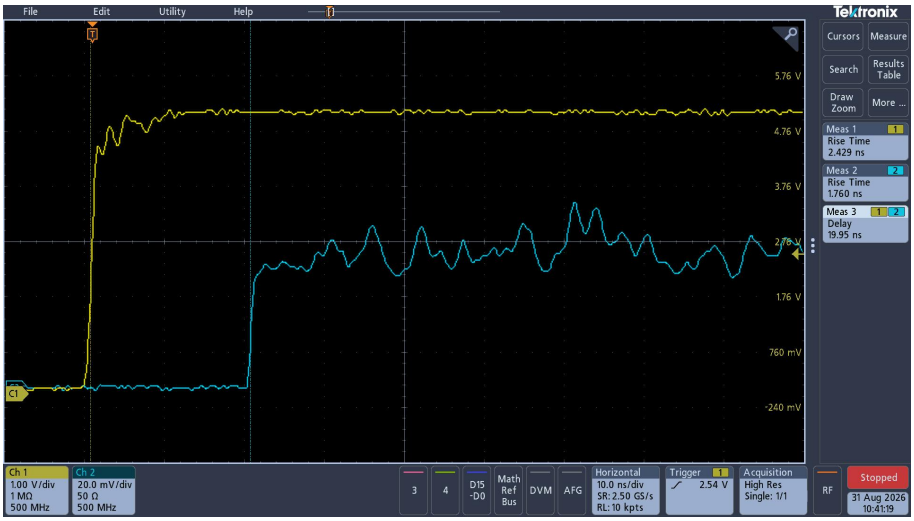
Other Optical Specifications

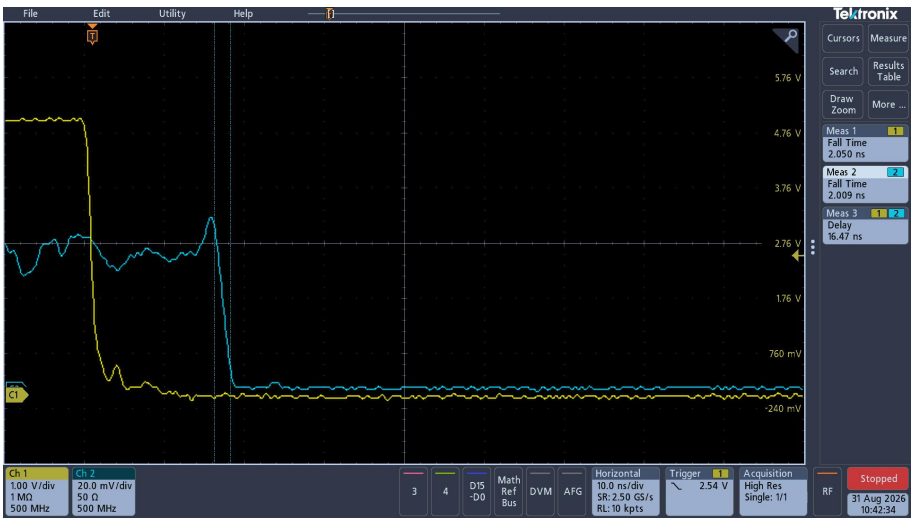
Description	Unit	Min	Max	Note
TTL Enable （Digital Modulation）				Test conditions (adapted for single-shot exposure of hundreds of milliseconds): Repetition frequency: 10 Hz, 50 % duty cycle
Enable Propagation Delay(Rise)	ns		20	1.Enable Rise 1ns 2.Fixed delay from enable rising edge to the onset of laser output
Propagation Delay(Fall)	ns		16.5	1.Enable Fall 1ns 2.Fixed delay from enable falling edge to the onset of laser turn-off
Jitter	ns		1	Random time fluctuation of laser edge arrival time. Analogy: expected arrival at 7 o'clock, actual arrival varies earlier or later; this time uncertainty is jitter.
Laser Rise	ns		2	Time for laser power to rise from 0 to target power
Laser Fall	ns		2	Time for laser power to fall from target power to 0



Other Optical Specifications







Electrical and Interface

- ***Connector (DB 15)：back and front side***

- ***Micro-B USB: back and front side***

Datasheet Revision History

Revision	Effective Date	Requirements changed
V00	07/09/2026	