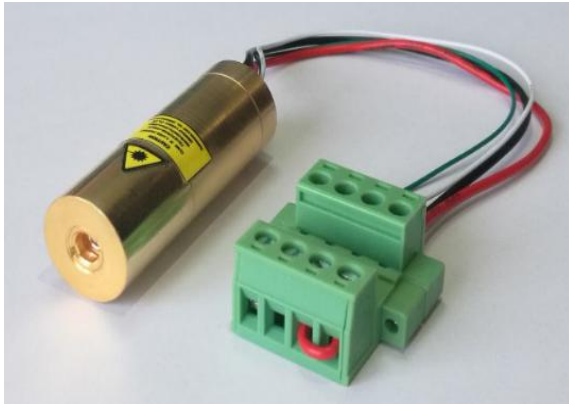


Yellow 553nm Laser Module

Wide Temperature Range

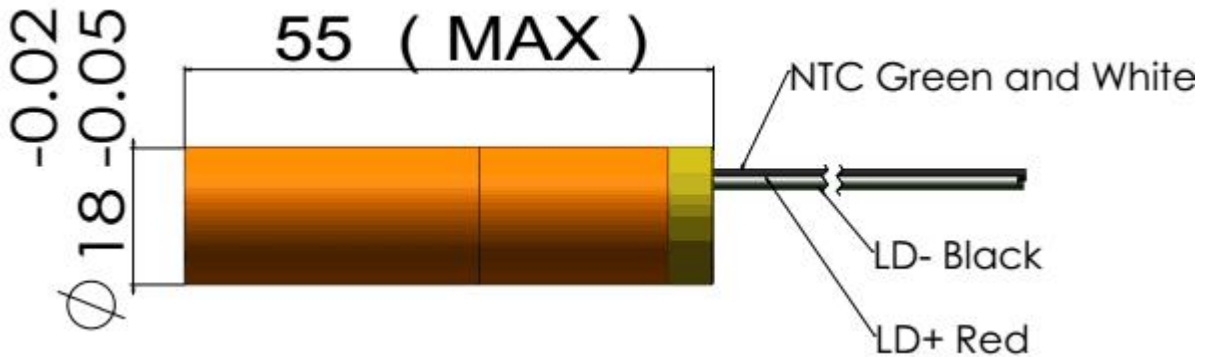


Y553D200-18x55-20

Features

- DPSS Laser
- 200mW@553nm
- Fast Rise Time
- High Reliability

Dimensions (Unit: mm)



Specifications				
Model Number		Y553D200-18x55-20		
Mechanical Specifications		<i>Min</i>	<i>Typ</i>	<i>Max</i>
Laser Head	Diameter (mm)	17.95	-	17.98
	Length (mm)	-	-	55
	Weight (g)	-	-	200
Housing Material		Brass with gold-plating		
Optical Specifications		<i>Min</i>	<i>Typ</i>	<i>Max</i>
Wavelength (nm)		551	553	555
Output Power (mW) at temperature T ⁽¹⁾		200	250	-
Power Stability at const. Temperature ⁽²⁾		-	-	+/- 5%
Output Power Mode		CW		
Laser Class		3		

⁽¹⁾ T is only one temperature point, may be anywhere between 15°C and 35°C

⁽²⁾ after max. 3 minutes

Beam Specifications		Min	Typ	Max
Beam Divergence (mrad) ⁽¹⁾		-	20	30
Beam Alignment Tolerance	Position (Δr , mm)	-	-	0.5
	Off-axis Angle (mrad)	-	35	60
Beam Diameter at Output Window (mm)		-	0.5	
Beam Mode Longitude		Multi		
Beam Roundness		see picture 5 on page 3		
Beam Mode Transverse		Multi		
Polarization Ratio (Linear)		100:1	-	-
Residual IR		-	-	3%
Electrical Specifications		Min	Typ	Max
Power Type		ACC		
LD Voltage (DC, V)		1.8	2	2.3
LD Operating Current (mA) at 2V		-	5,000	5,500
Thermistor Constants		$A = 2.231e^{-3}$ $B = 4.694e^{-5}$ $C = 0.884e^{-6}$		
Thermistor Resistance		6.6K Ω @35 $^{\circ}$ C 8.2K Ω @30 $^{\circ}$ C 10.0K Ω @25 $^{\circ}$ C 12.3K Ω @20 $^{\circ}$ C 16.4K Ω @15 $^{\circ}$ C 18.5K Ω @10 $^{\circ}$ C		
Power Consumption (W) at 24 $^{\circ}$ C		-	10	12.65
Housing Isolation		No		
ESD protection		No		
Wire Length (mm)		200 (+/-50)		
Wire Type ⁽²⁾		20AWG / 28AWG		
Reliability		Min	Typ	Max
Operating Case Temperature Range ($^{\circ}$ C)		T-0.5	T ⁽³⁾	T+0.5
Rise Time (mins) at 5A (T-0.5 $^{\circ}$ C to T+0.5 $^{\circ}$ C)		-	3	5
Storage Temperature ($^{\circ}$ C)		0	-	40
Environmental Humidity (RH, %)		5	-	85
Lifetime (hours) (MTTF at 25 $^{\circ}$ C)		5,000	-	-
RoHS Compliance Declaration		Yes		

⁽¹⁾ Full Angle ($1/e^2$)

⁽²⁾ 20AWG for LD wires. 28AWG for NTC wires

⁽³⁾ T is only one temperature point, may be anywhere between 15 $^{\circ}$ C and 35 $^{\circ}$ C

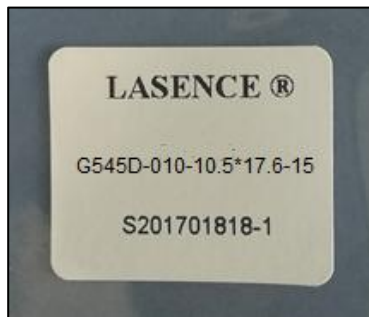
Remarks

- Product ID for placing orders: Y553D200-1855-20
- Datasheet Version: 1
- No Photodiode
- Customer is responsible for suitable heat sinking
- Label on plastic bag (see picture of another product's label in picture 2):
 - LASENCE®
 - Y553D200-1855-20
 - Lasence Order Number - Module Number
 - Label Length: 30mm (+/-3mm); Width: 25mm (+/-3mm)
- Anti-static protector for transportation (see picture 4)
- Example of beam spot (see picture 5)
- Laser Beam Warning Label on module housing (see picture 1)
- Laser Marking on module housing (see picture 3):
 - Lasence Material Code
 - Lasence Order Number - Module Number

Picture 1



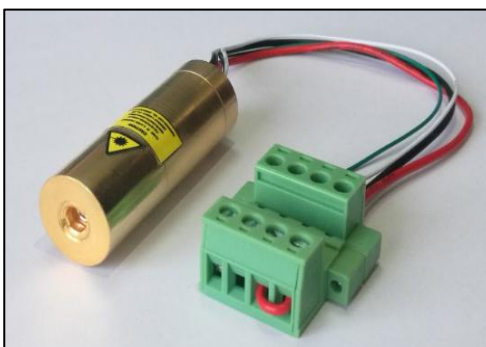
Picture 2



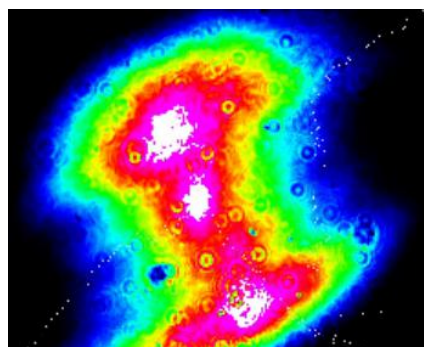
Picture 3



Picture 4



Picture 5



Typical Output Performance (examples)

1.) Power vs. Current

