

# 1535nm Eye Safe Laser Transmitting Antenna



## DESCRIPTION

CL-1535-25X series human eye safety laser transmitting antenna is an integrated laser module composed of erbium glass microplate laser, beam expanding lens and photodetector (PIN) developed by Crylink. It is specialized in laser ranging, laser remote sensing, laser radar and other fields. The series of products can provide 1535nm laser output of 100-300 $\mu$ J, divergence Angle of about 0.5mrad, and provide laser zero signal, with small size, high reliability, wide temperature operation and so on.

## FEATURES

- Eye safe wavelength
- Built-in detector
- Divergence Angle 0.5 mrad
- Compact structure
- High reliability

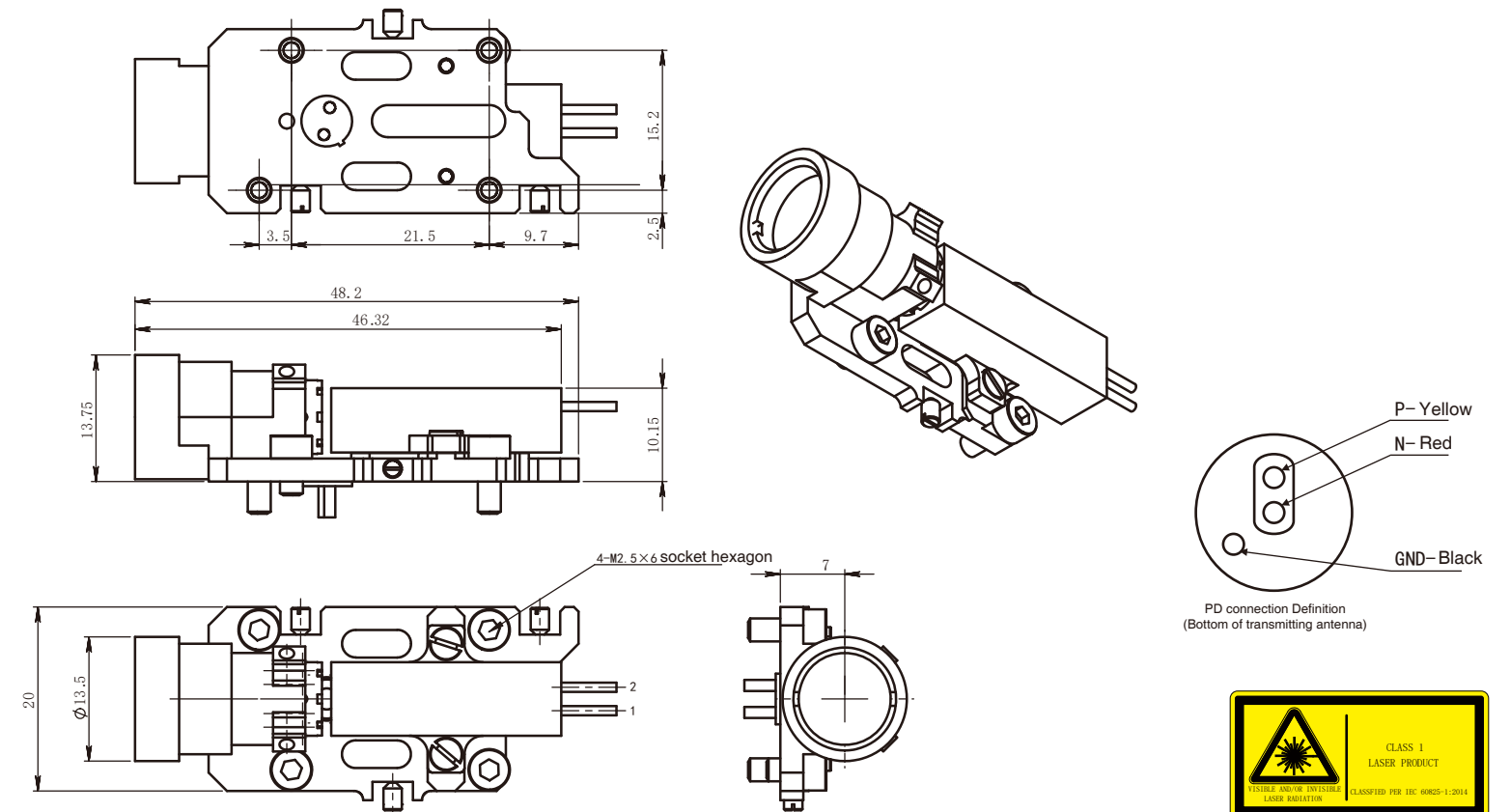
## APPLICATIONS

- Laser ranging
- Laser remote sensing
- Laser laser radar

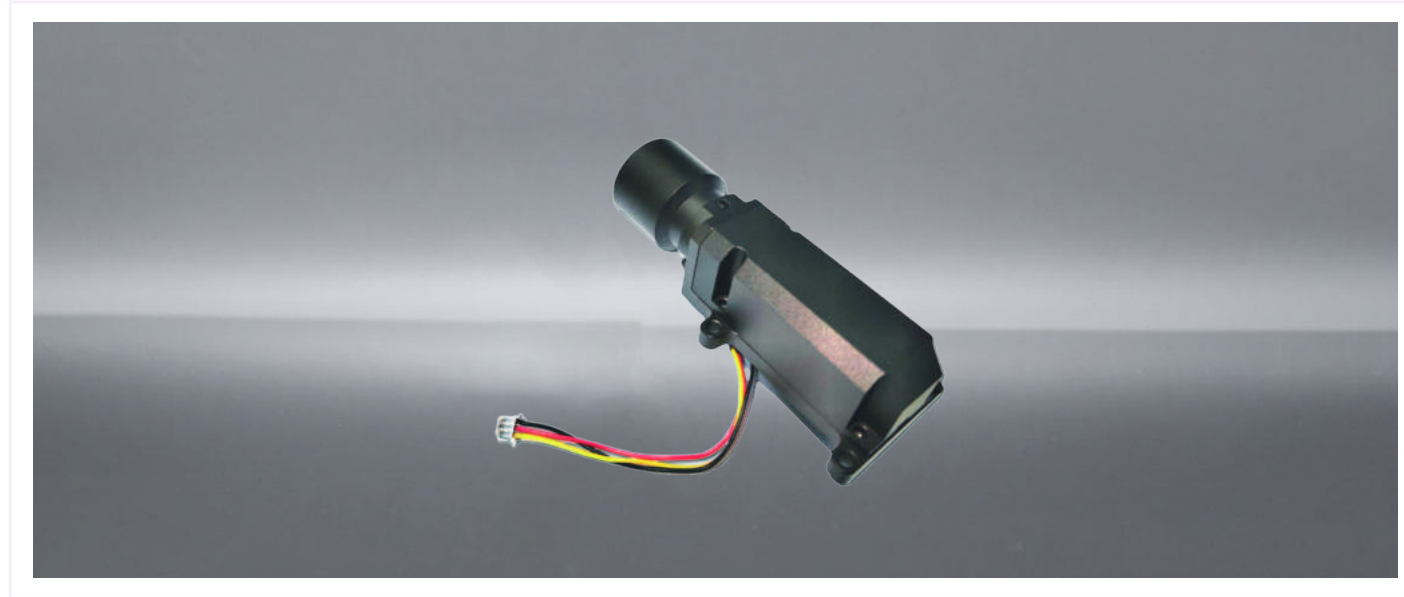
## LOW ENERGY 1535 LASER TRANSMITTING ANTENNA PRODUCT MODEL

Model	CL-LF-100-25X	CL-LF-200-25X	CL-LF-300-25X
Optical Parameters			
Wavelength (nm)		1535	
Repetition frequency (Hz)		10	
Output energy ( $\mu$ J)	100	200	300
Pulse width (ns)		5	
Pump width (ms)	$\leq 2$	$\leq 2$	$\leq 2.5$
Light spot diameter (mm)	7.5	8	8.5
Divergence angle Typ. (mrad)	0.55	0.5	0.45
Lens magnification		25X	
System Parameters			
Working current (A)	8	10	12
Working voltage (V)		1.8	
Vibration		5Hz, 2.5g	
Shock		Axial direction 100g, 1ms	
Working temperature ( $^{\circ}$ C)		-40~65	
Storage temperature ( $^{\circ}$ C)		-55~80	
Storage Humidity		$\leq 85\%$	
Working life (H)		$\geq 5000$	

## OUTLINE SIZE (mm)



# High Power 1535nm Eye Safe Laser Transmitting Antenna



## HIGH ENERGY 1535 LASER TRANSMITTING ANTENNA PRODUCT MODEL

Model	CL-LF-500-30X	CL-LF-1000-30X
Optical Parameters		
Wavelength (nm)	1535	
Repetition frequency (Hz)	10	5
Output energy (μJ)	500	1000
Pulse width (ns)	6	7
Pump width (ms)	≤2.5	
Light spot diameter (mm)	14	16
Divergence angle Typ. (mrad)	0.28	0.25
Lens magnification	30X	
System Parameters		
Working current (A)	20	30
Working voltage (V)	1.8	
Vibration	5Hz, 2.5g	
Shock	Axial direction 100g, 1ms	
Working temperature (°C)	-40~65	
Storage temperature (°C)	-55~80	
Storage Humidity	≤85%	
Working life (H)	≥5000	

## DESCRIPTION

CL-1535-30X series human eye safety laser transmitting antenna is an integrated laser module composed of erbium glass microplate laser, beam expanding lens and photodetector (PIN) developed by Crylink. It is specialized in laser ranging, laser remote sensing, laser radar and other fields. The series of products can provide 1535nm peak power laser output of 500μJ-1mJ, divergence Angle less than 0.3mrad, and provide laser zero signal, with small size, high reliability, wide temperature operation, etc.

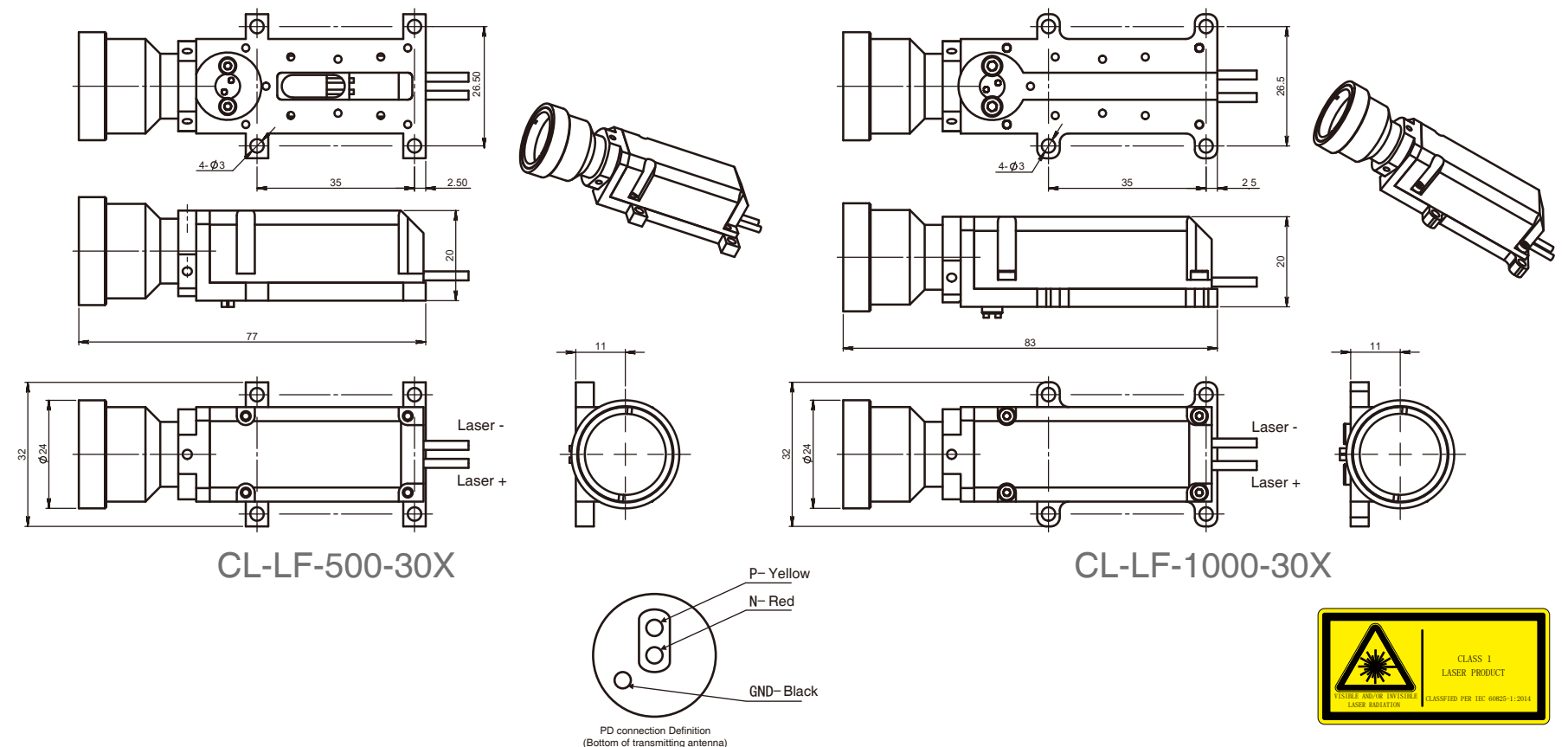
## FEATURES

- Eye safe wavelength
- Peak value power
- Divergence Angle < 0.3 mrad
- Built-in detector
- Compact structure
- High reliability

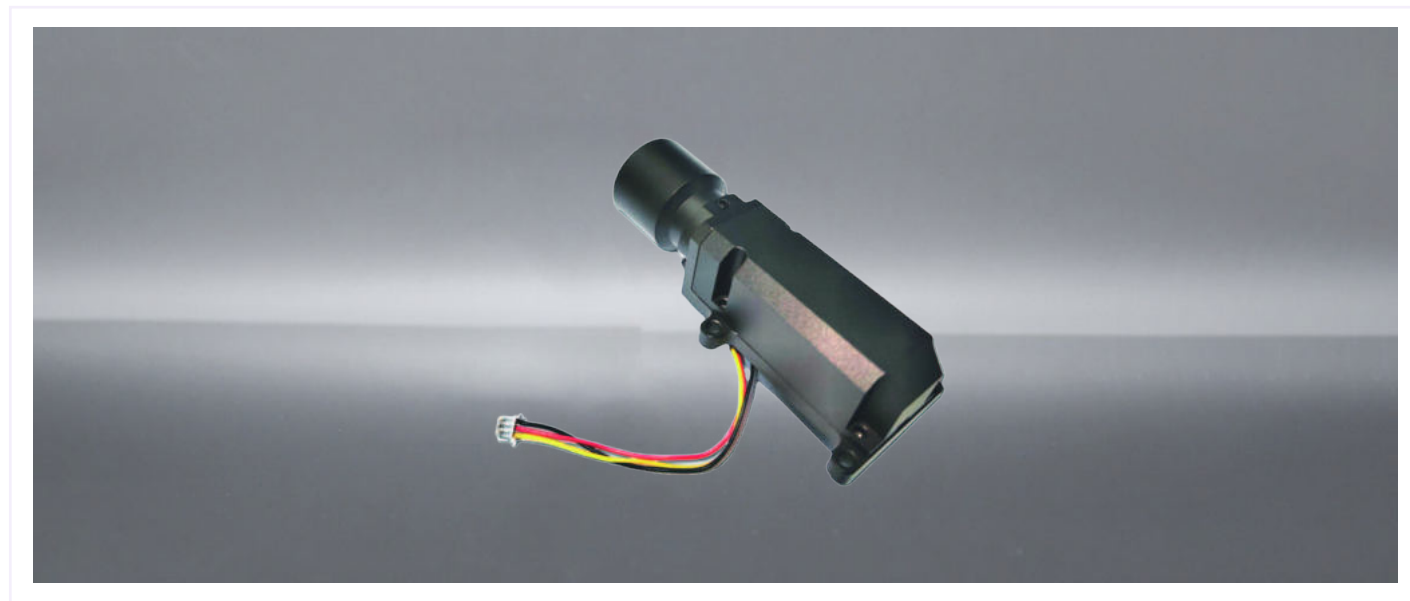
## APPLICATIONS

- Laser ranging
- Laser remote sensing
- Laser laser radar

## OUTLINE SIZE (mm)



# High Repetition Frequency 1535nm Eye Safe Laser Transmitting Antenna



## HIGH REPETITION FREQUENCY 1535 LASER TRANSMITTING ANTENNA PRODUCT MODEL

Model	CL-HF-40-40X	CL-HF-20-40X	CL-HF-10-40X	CL-HF-5-40X
Optical Parameters				
Wavelength (nm)	1535			
Repetition frequency (kHz)	1	2.5	5	10
Output energy ( $\mu$ J)	40	20	10	5
Pulse width (ns)	5	6	8	10
Light spot diameter (mm)	12			
Divergence angle Typ. (mrad)	0.4	0.4	0.45	0.45
Lens magnification	40X			
System Parameters				
Working current (A)	6			
Working voltage (V)	1.8			
Vibration	5Hz, 2.5g			
Shock	Axial direction 100g, 1ms			
Working temperature ( $^{\circ}$ C)	-40~65			
Storage temperature ( $^{\circ}$ C)	-55~80			
Storage Humidity	$\leq$ 85%			
Working life (H)	$\geq$ 5000			

### DESCRIPTION

CL-1535-40X series human eye safety laser transmitting antenna is an integrated laser module composed of erbium glass microplate laser, beam expanding lens and photodetector (PIN) developed by Crylink. It is specialized in laser ranging, laser remote sensing, laser radar and other fields. This series of products can provide 1535nm laser output with a small divergence Angle of 1-10kHz, 5-40 $\mu$ J, and provide laser zero signal, with small volume, high reliability, wide temperature operation and other characteristics.

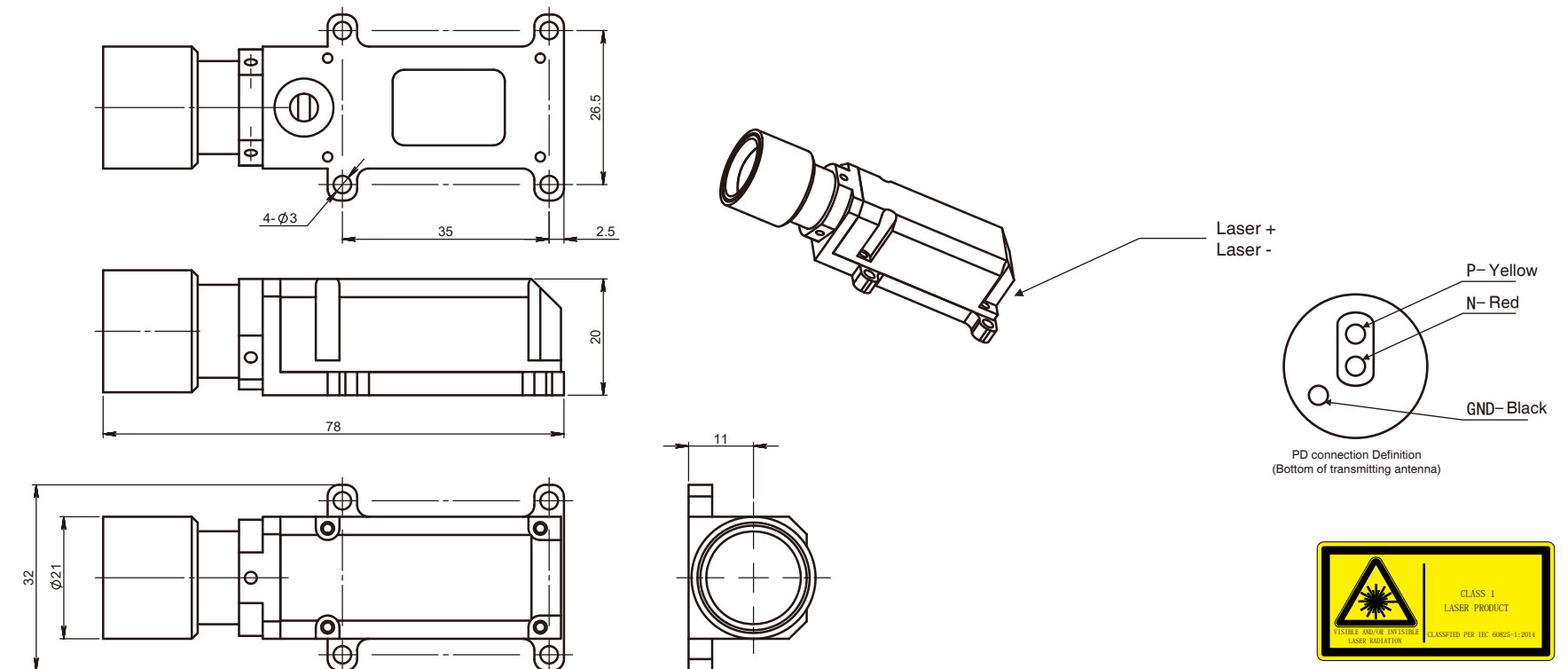
### FEATURES

- Eye safe wavelength
- High repetition rate
- Divergence Angle 0.5 mrad
- Built-in detector
- Compact structure
- High reliability

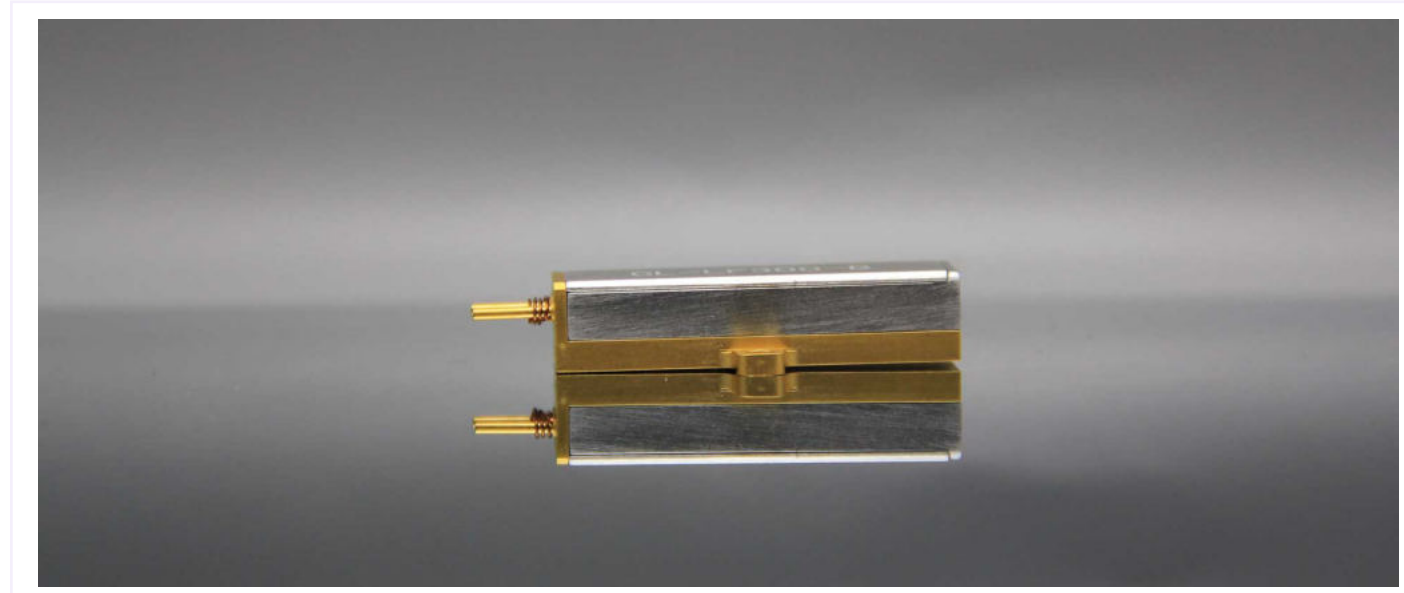
### APPLICATIONS

- Laser ranging
- Laser remote sensing
- Laser laser radar

### OUTLINE SIZE (mm)



# 1535nm Eye Safe Laser



## DESCRIPTION

1535 nm laser is one of the series of solid state laser provided by Crylink. It is based on the bonding crystal of Er: glass and Co: Spinel. It's a good erbium laser. Due to our mature bonding and packaging technology, our 1535 nm laser also can be called as 1535 nm microchip laser.

The most important advantage of our 1535 nm laser is its safety to users' eyes. Because there is higher access of human eyes to 1535 nm laser than other lasers (like 1064 nm Nd:YAG laser). Besides, our 1535 nm laser can provide large pulsed laser energy up to 400 uJ. And lighter weight and smaller size are its other brightened spots.

Our 1535 nm laser has wide applications in infra red scope. It can be used as light source in lightweight lidar sensor, as well as in laser range finder.

## FEATURES

- The laser pulse width can reach 5ns
- Maximum PRF to 1kHz
- Pulse energy up to 400μJ

## APPLICATIONS

- Laser Ranging
- Lidar

## LOW / HIGH ENERGY 1535 LASER MODULE PRODUCT MODEL

Model	CL-LF100-B	CL-LF200-B	CL-LF300-B	CL-LF100-B-PIN*	CL-LF200-B-PIN*	CL-LF500-B	CL-LF-800-B	CL-LF1000-B
Wavelength	1535nm							
Output energy	100μJ	200μJ	300μJ	100μJ	200μJ	500μJ	800μJ	1000μJ
Pulse width	≤5ns	≤5ns	≤5ns	≤5ns	≤5ns	≤6ns	≤7ns	≤7ns
Repetition Rate	10Hz	10Hz	10Hz	10Hz	10Hz	10Hz	10Hz	5Hz
Divergence angle Typ.(mrad)	10mrad	10mrad	10mrad	10mrad	10mrad	8mrad	7mrad	7mrad
Beam Mode	TEM <sub>00</sub>							
Working current	7A	10A	12A	8A	10A	20A	30A	30A
Weight	7g	10g	12g	7.5g	7.5g	13g	20g	20g
Size	21×8×7mm <sup>3</sup>	25×8×7mm <sup>3</sup>	25×8×7mm <sup>3</sup>	21×8×7mm <sup>3</sup>	21×8×7mm <sup>3</sup>	32×8×7mm <sup>3</sup>	38×9×7.7mm <sup>3</sup>	38×9×7.7mm <sup>3</sup>
Working temperature	-40°C~+65°C							
Storage temperature	-55°C~+80°C							

Note: \*This model has a built-in PIN, and the PIN amplitude is 2V@50Ω impedance

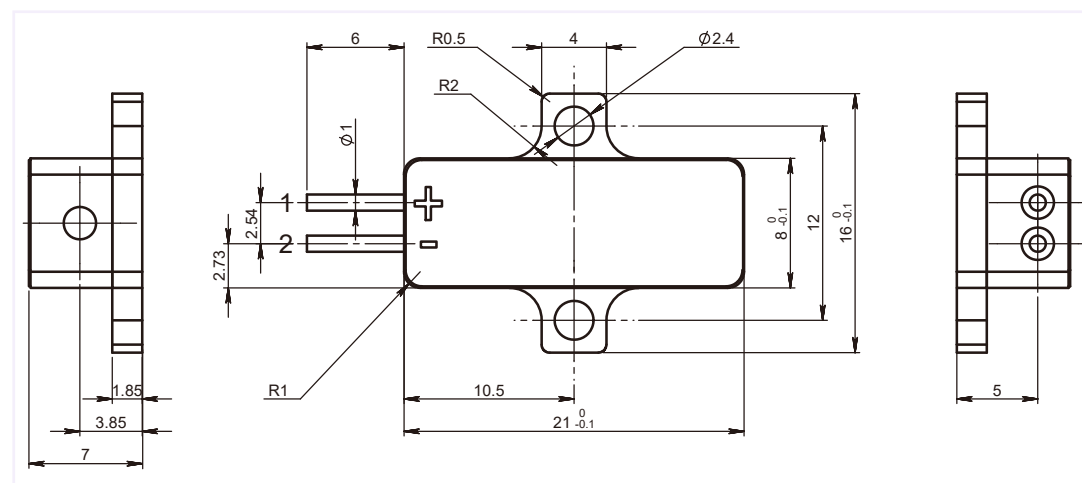
## HIGH REPETITION 1535 LASER MODULE PRODUCT MODEL

Model	CL-HF40-B	CL-HF20-B	CL-HF10-B	CL-HF5-B	CL-HF40-B-PIN*	CL-HF20-B-PIN*	CL-HF10-B-PIN*	CL-HF5-B-PIN*
Wavelength	1535nm							
Output energy	40μJ	20μJ	10μJ	5μJ	40μJ	20μJ	10μJ	5μJ
Pulse width	≤5ns	≤6ns	≤8ns	≤10ns	≤5ns	≤6ns	≤8ns	≤10ns
Repetition Rate	1KHz	2.5KHz	5KHz	10KHz	1KHz	2.5KHz	5KHz	10KHz
Divergence angle Typ.(mrad)	≤16mrad	≤17mrad	≤18mrad	≤20mrad	≤16mrad	≤17mrad	≤18mrad	≤20mrad
Working voltage	2V	2V	2V	2V	-	-	-	-
Spot diameter	0.3mm	0.3mm	0.3mm	0.3mm	-	-	-	-
Directivity	<0.2°	<0.2°	<0.2°	<0.2°	-	-	-	-
Beam Mode	TEM <sub>00</sub>							
Working current	5A							
Weight	≤10g	≤10g	≤10g	≤10g	7g	7g	7g	7g
Size	21×8×7mm <sup>3</sup>							
Working temperature range	-40°C~+65°C							
Storage temperature range	-55°C~+80°C							

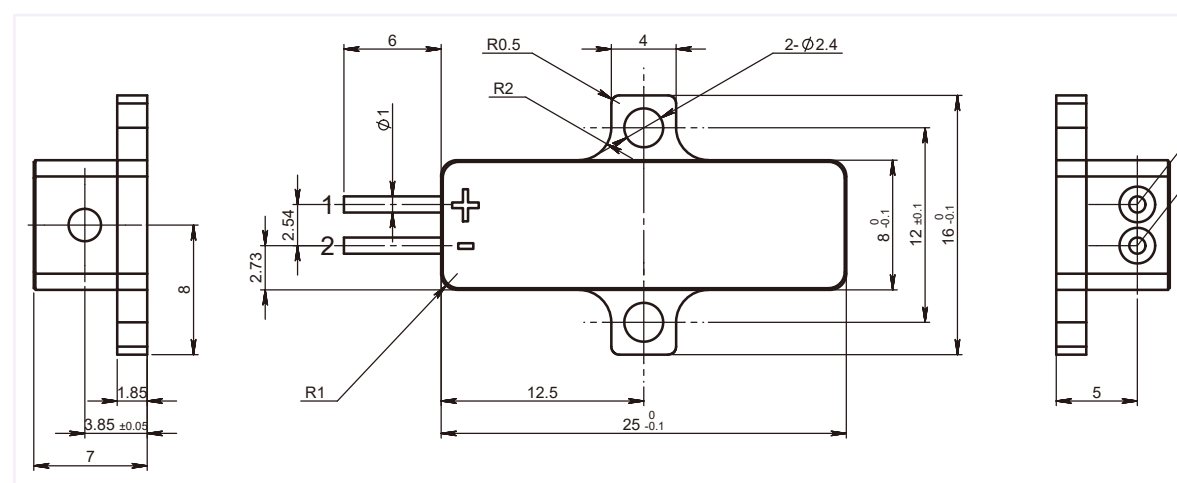
Note: \*This model has a built-in PIN, and the PIN amplitude is 2V@50Ω impedance



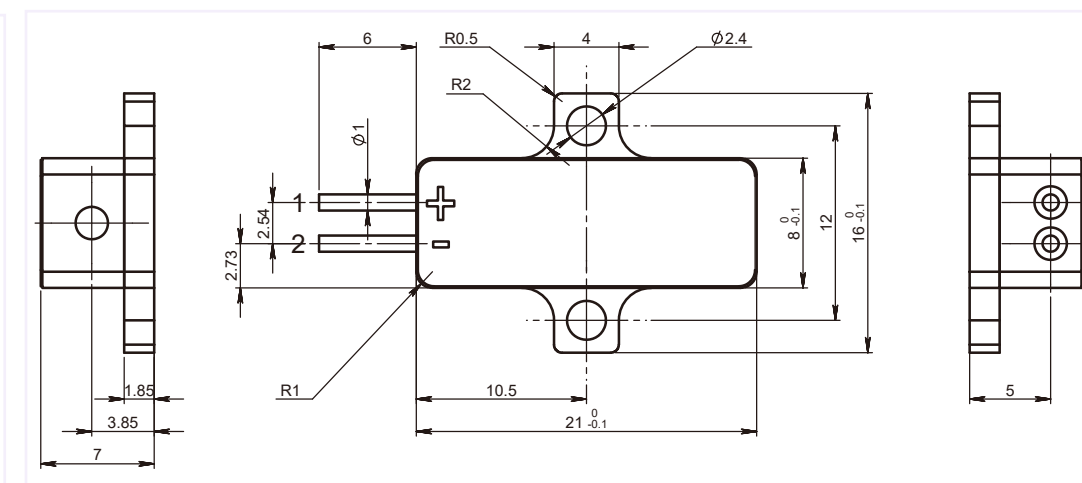
# OUTLINE SIZE (mm)



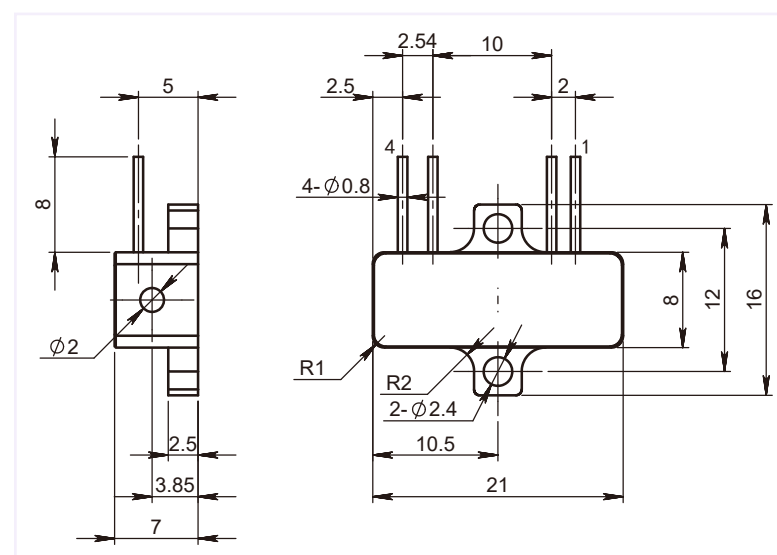
CL-LF100-B



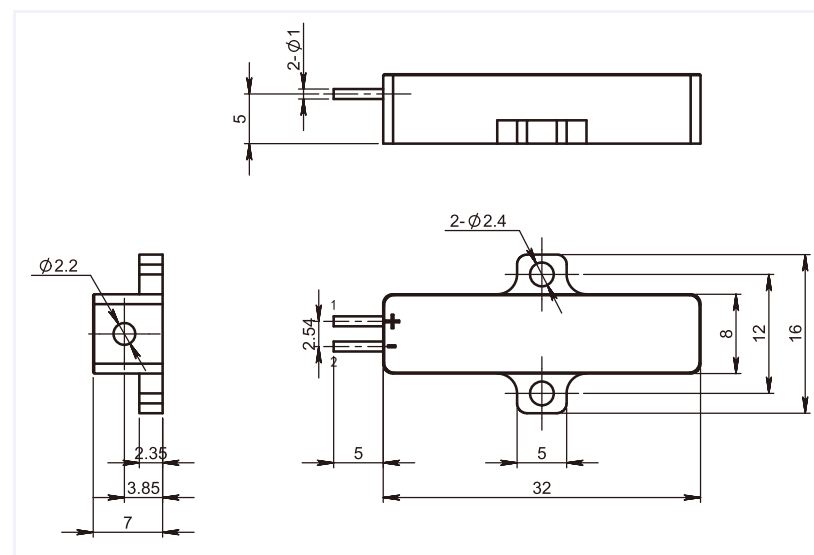
CL-LF200-B、CL-LF300-B



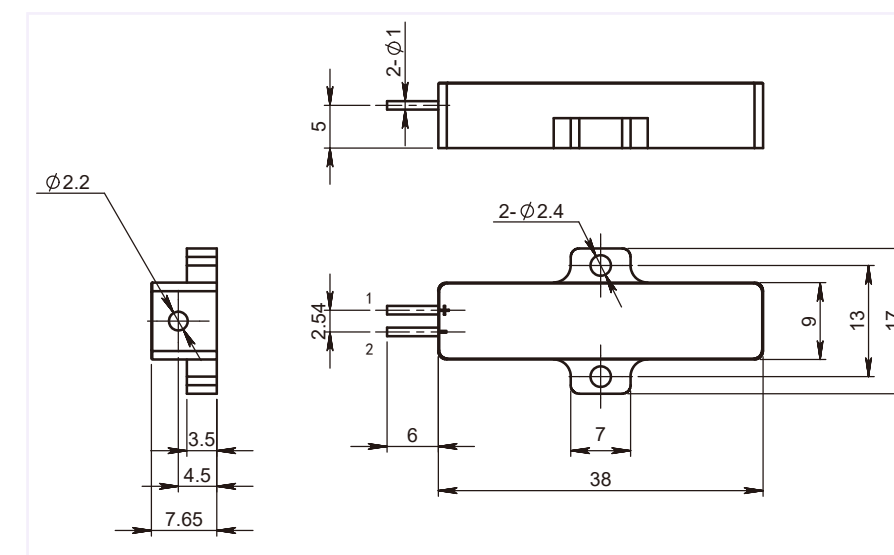
CL-HF40-B、CL-HF20-B、CL-HF10-B、CL-HF5-B



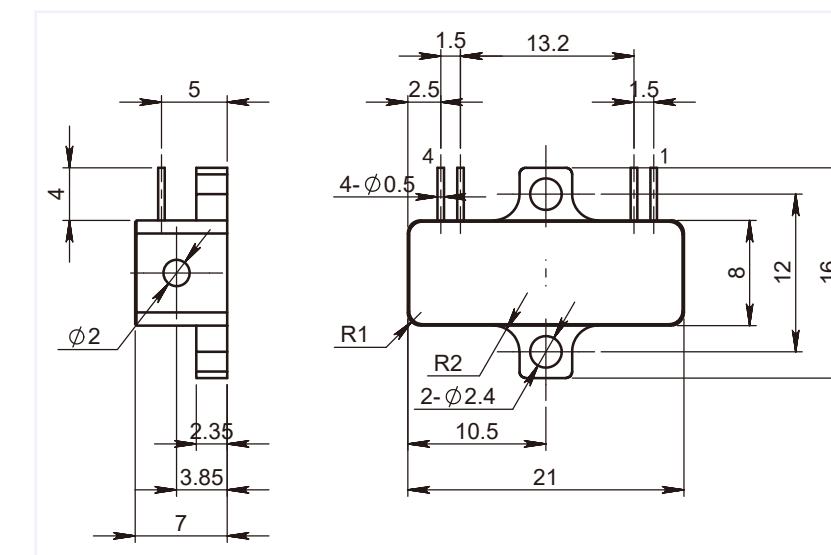
CL-LF100-B-PIN、CL-LF200-B-PIN



CL-LF500-B



CL-LF-800-B、CL-LF1000-B



CL-HF40-B-PIN、CL-HF20-B-PIN、  
CL-HF10-B-PIN、CL-HF5-B-PIN

