# MCE-1 Series 3ns Solid-state Lasers



The MCE-1 series 3ns solid-state lasers are RealLight's self-developed, passively Q-switched diode-pumped solid-state lasers. This series utilizes a split-cavity design, delivering high power, high repetition rate and large energy, with standard wavelengths of 1064nm and 532nm. Beam expanders and other customized specifications are available upon request.

### **Key Features**

- Repetition rate up to 2.5kHz
- Average power up to 1.0W@1064nm
- Sealed package, high reliability

#### **Applications**

Laser marking Laser etching

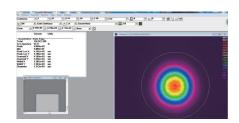
Laser ablation LIDAR

Laser internal engraving

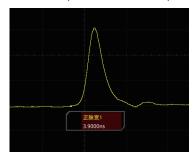
### **Technical Specifications**

Optical Parameters			
Wavelength (nm)	1064	532	
Repetition rate (kHz)	2.5	2.5	
Average power (mW)	1000	500	
Pulse energy (μJ)	400	250	
Pulse width (ns)	3	3	
Power stabilty (8h)	±3%		
Beam profile	TEM <sub>00</sub>		
System Parameters			
Supply power voltage	12V,>180W		
Laser head dimensions (W×H×L,mm)	60×39×158		

- 1. Beam expanders are an optional part and are not included by default unless otherwise noted.
- 2. Temperature control is required for laser head during operation. The temperature of the base plate should be controlled at 15-35°C.

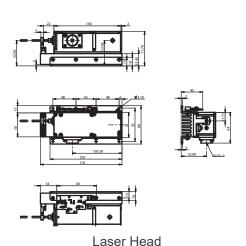


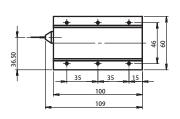
Beam Profile (without beam expander)

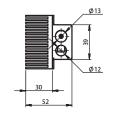


Typical Pluse

### Mechanical Drawings (in mm)







Pumping source









# MCE-2 Series 3ns Solid-state Lasers

### **Key Features**

- High average power and small size
- ◆ Spatial mode TEM<sub>00</sub>
- Sealed package, high reliability
- Polarization-stable

### **Applications**

Seed laser

Micromachining

Biomedicine

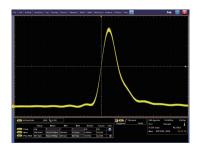
Laser-induced breakdown spectroscopy (LIBS)

Laser-induced plasma spectroscopy (LIPS)

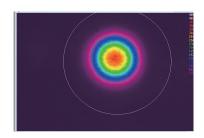
LIDAR

# **Technical Specifications**

Optical Parameters			
Wavelength (nm)	1064		
Repetition rate (kHz)	2.5	10	
Average power (mW)	500	800	
Pulse energy (μJ)	200	80	
Pulse width (ns)	3	2.5	
Power stabilty (8h)	±3%		
Beam profile	TEM <sub>00</sub>		
Collimated beam diameter (mm)	≈5		
Beam divergence, full angle (typ., @1/e², mrad)	≤1		
Polarization ratio	>100:1		
System Parameters			
Supply power voltage	18V,>72W		
External trigger	Gated, 5V TTL, drive high to enable laser		
Laser head dimensions (W×H×L,mm)	32×21×110		
Operation temperature (°C, require air cooling)	15~35		
Storage temperature (°C)	-20~60		

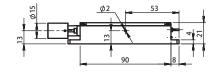


Typical Pluse

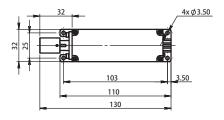


Beam Profile

## Mechanical Drawings (in mm)







Drawings



