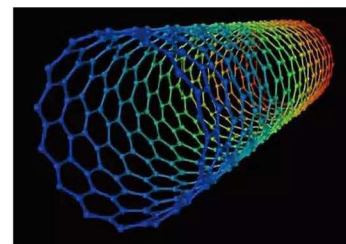
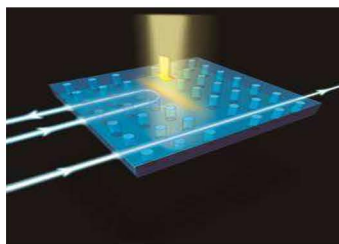


## 2 $\mu\text{m}$ High Power Ultrafast Fiber Laser - Rainbow 2000 HP

Rainbow 2000 HP represents the long-wavelength capabilities of NPI's Watt-level femtosecond oscillators. It utilizes a unique dispersion engineering technology to ensure good balance between pulse duration and spectral width. The standard product has a center wavelength of 1970 nm, a pulse width of <300 fs, repetition rate of 80MHz, and an average output power of >1 W. As with our other ultrafast products, Rainbow 2000 HP has flexible parameters upon user requests.

Rainbow 2000 HP is well-suited for applications such as Mid-IR frequency conversion, Nonlinear optics and Silicon photonics. It can meet a broad range of R&D requirements of the scientific community.



### Key Features :

- Long-Term Stable Operation
- High Pulse Energy
- Reliable Mode-Locking
- All-PM Solution

### Applications :

- Mid-IR Frequency Conversion
- Nonlinear optics
- Mid-IR spectroscopy
- Silicon photonics

### » Main Specification:

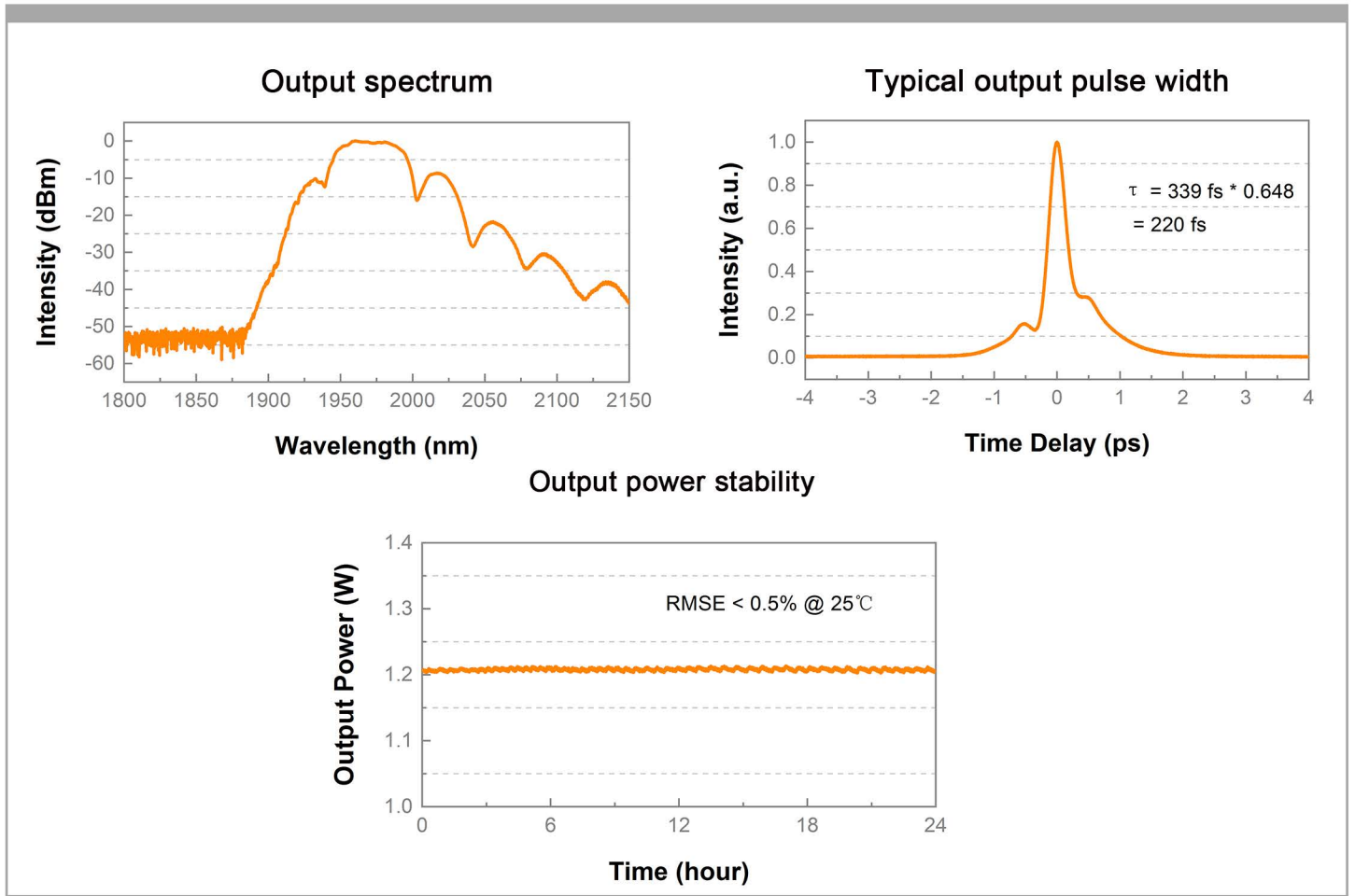
#### Laser Parameters

Operating Wavelength	nm	1970 $\pm$ 10
Pulse Width (FWHM)	fs	<300
Repetition Rate	MHz	80
Average Power	W	>1
Average Power Stability	% RMS	<0.5 (24h@25 $^{\circ}$ C)
Single Pulse Energy	nJ	>12.5
Polarization Extinction Ratio	dB	>20
Beam Quality		TEM00, M <sup>2</sup> <1.2
Output Mode		Free-space /Shutter

#### Electrical, Environmental and Mechanical Parameters

Trigger Signal	V	1 V @50 Ohm
Power Consumption	Watt	<150
Supply Voltage	VAC	100-240 (50Hz/60Hz)
Operational Temperature Range	$^{\circ}$ C	10-45
Operational Humidity Range	%	20~80 ( Non-condensing )
Storage Temperature Range	$^{\circ}$ C	0-50
Storage Humidity Range	%	20~80 ( Non-condensing )
Weight Laser Head	kg	10
Dimensions Laser Head	mm(L $\times$ W $\times$ H)	445 $\times$ 300 $\times$ 134
Weight supply unit	kg	10
Dimensions supply unit	mm(L $\times$ W $\times$ H)	380 $\times$ 445 $\times$ 94
Cooling		Air-cooled

### Test Data :



### Machine Drawing

