

# HYPERION-S

## High-Power Nonlinear Pulse Compressor



Pulse width compressed to  $<50$  fs, suitable for ultrafast laser applications

Supports cascading with HCF systems to meet various application requirements

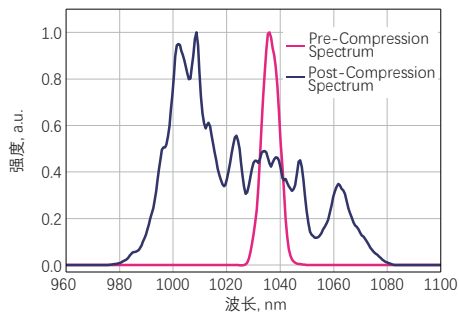
$<0.5\%$  RMS power fluctuation over 24 hours, ensuring 24/7 long-term stable operation

Compression efficiency  $>85\%$ , maintaining high energy density output

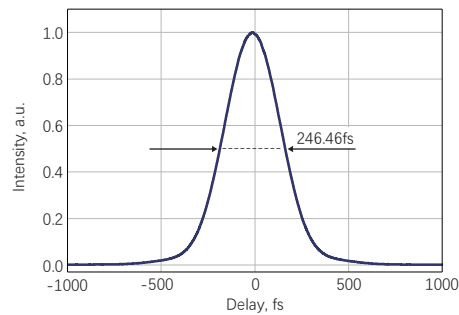
Easy operation without complex adjustments, adaptable to various environments

Suitable for high-end applications such as micro/nano machining and precision manufacturing

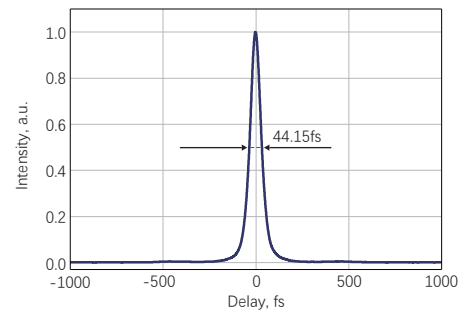
HYPERION-S Typical Output Spectrum



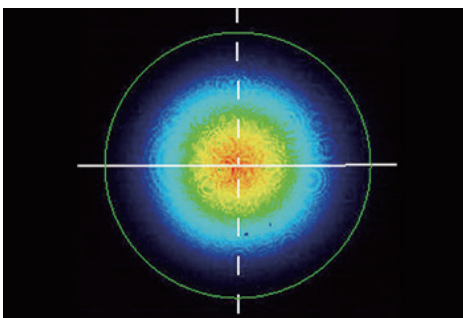
HYPERION-S Typical Input Pulse Width



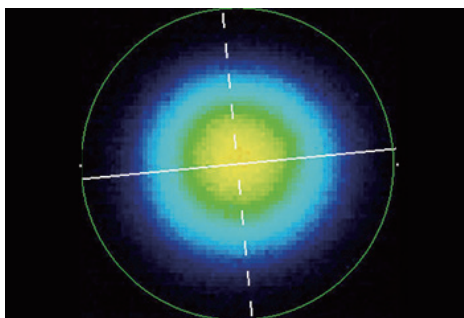
HYPERION-S Typical Output Pulse Width



HYPERION-S Near-Field Beam Profile

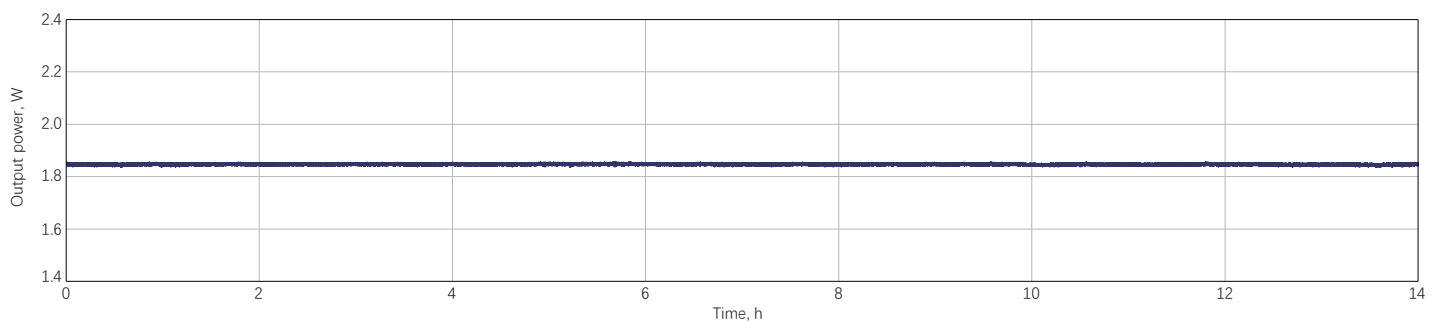


HYPERION-S Far-Field Beam Profile

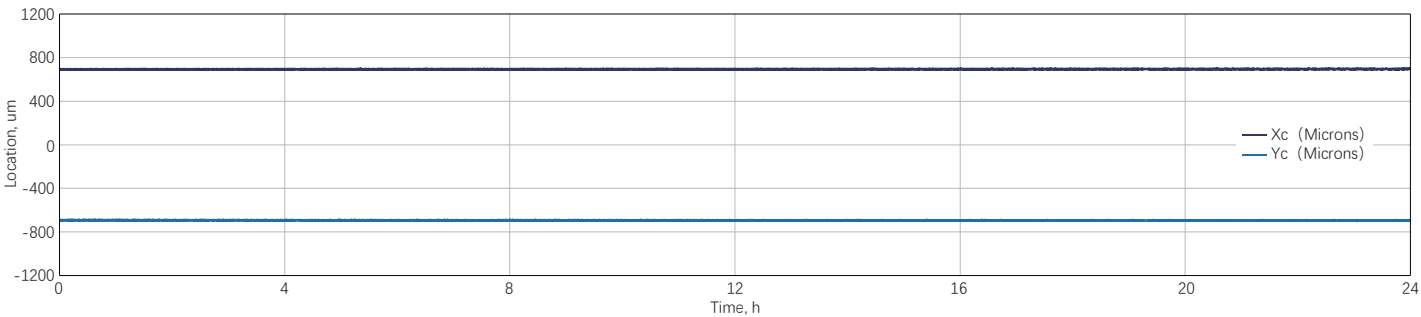


### HYPERION-S

Power Stability: RMS=0.0946%@14h-1.847W/18.43μJ/10kHz



HYPERION-S  
Pointing Stability: RMS=3.51μm@24h-1.847W/18.43μJ/100kHz



Specifications

| Parameter                                              | HYPERION-S                                                 |
|--------------------------------------------------------|------------------------------------------------------------|
| Incident pulse width                                   | 150fs - 1ps                                                |
| Incident pulse energy                                  | 10 - 20μJ (5 - 10μJ optional)                              |
| Incident laser central wavelength                      | 1036 ± 5nm                                                 |
| Maximum compatible power                               | 80W                                                        |
| Typical compression ratio                              | 5 - 10                                                     |
| Compressor efficiency                                  | > 85%                                                      |
| Typical output pulse width                             | < 50fs                                                     |
| Compatibility                                          | Can be cascaded with HCF system to output few-cycle pulses |
| Dimensions (L×W×H)                                     | 425 × 270 × 146mm (L×W×H)                                  |
| Weight (kg)                                            | 19.3kg                                                     |
| Remaining weight (kg)                                  | 24kg (Water-cooled machine)                                |
| Power supply requirements                              | AC 220V/10A                                                |
| Power supply requirements for the water-cooled machine | 220V/0.6-5.6A/10.2kW (CWUP - 10AI)                         |

Drawings

HYPERION-S Outline Drawing

