



HIGH ENERGY PICOSECOND LASER MODULE

GENKI XP



NEW



**NEW 100W
 MICROMACHINING
 PICOSECOND
 LASER**

The Genki XP platform pushes industrialization of high energy and high power **picosecond** lasers further. The system is based on the ultra-stable Genki seed laser and provides clean pulses shorter than **10 ps**, which is an optimal pulse duration window for many micromachining applications. To satisfy the increasing demand of picosecond laser workstations, the Genki XP has been optimized to provide up to **100 W** of average power and **300 μJ** pulse energy at the industry-standard wavelengths of **1030 and 1064 nm**. The laser can be tailored to work at lower repetition rates with even higher energies or at several MHz to follow high-speed automated processes. The Genki XP has been designed for the easiest and most cost-effective possible system integration can be mounted in any direction and offers full remote control capability.

OPTIONS:

- + Green 532 nm
- + UVA 355 nm
- + UVC 266 nm
- + Synchronization to external clock

MAIN APPLICATIONS:

- + Material processing
- + Glass and sapphire cutting
- + Plasma generation
- + Nonlinear optics

OUTSTANDING FEATURES :

- + Pulse energy up to 300 μJ
- + High pulse quality
- + Narrow spectral width
- + Excellent energy and pointing stability
- + Mountable in any direction
- + Maintenance free – no alignment required
- + Complete remote control
- + Burst mode
- + 24/ 7 operation

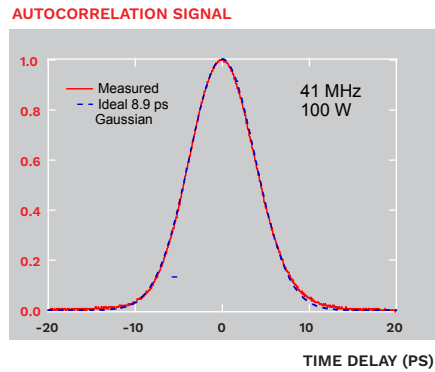


	GENKI - 10 XP	GENKI - 10 XPC
CENTER WAVELENGTH	1064 nm	1030 nm
PULSE DURATION ^{1,2}	< 10 ps	< 10 ps
AVG. OUTPUT POWER [UP TO] ²	100 W	40 W
PULSE ENERGY [UP TO] ²	300 μJ	100 μJ
PULSE REPETITION RATE ^{1,2}	single shot – 80 MHz	
SPECTRAL BANDWIDTH ²	< 1 nm	< 2 nm
BEAM QUALITY	M ² < 1.3, TEM ₀₀	
PER	> 20 dB	
AMPLITUDE NOISE [24 H]	< 1% rms	< 2% rms
LASER OUTPUT	collimated free space	
ENVIRONMENTAL		
WARM-UP TIME	< 30 minutes	
OPERATION TEMPERATURE	18 °C – 32 °C	
STORAGE TEMPERATURE	- 20 °C – 65 °C	
ON/OFF CYCLES	> 10000	
MECHANICAL		
SIZE LASER SYSTEM	505 x 630 x 142 mm ³	300 x 401 x 81 mm ³
WEIGHT SYSTEM	70 kg	15 kg
SIZE CONTROL UNIT	-	133 x 483 x 400 mm ³ (19"/3U rack mount)
WEIGHT CONTROL UNIT	-	10 kg
ELECTRICAL		
POWER SUPPLY	24 VDC/25 A + 48 VDC/21 A or 90 – 264 VAC, 47 – 63 Hz	24 VDC/25 A or 90 – 264 VAC, 47 – 63 Hz
POWER CONSUMPTION	1600 W	600 W
COOLING		
LASER SYSTEM	water cooled	

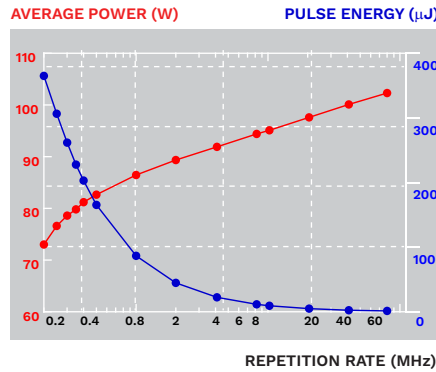
¹ Please inquire for possible combinations of pulse duration, average power and repetition rate
² Spectral bandwidth depends on pulse duration, pulse energy and repetition rate
³ Exact size and weight depend on pulse duration, pulse repetition rate, average power and wavelength



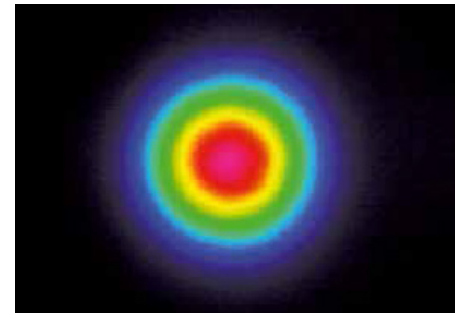
PULSE PROFILE



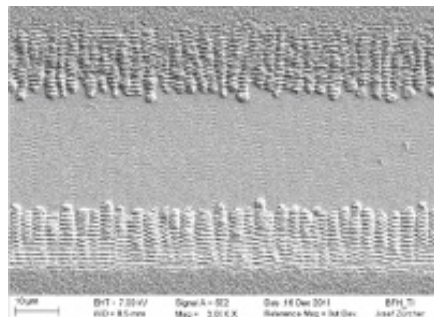
OUTPUT POWER AND PULSE ENERGY



BEAM PROFILE



APPLICATION



P2 scribe on Mo/CIGS/IZO thin film solar module realized with the Genki XP, 4W, 10 kHz, 1064 nm.
 © A. Burn et al., Proc. SPIE 9735, 973504-1:13, 2016