

# Satsuma Display

*Flexibility and experience in a single compact laser*

Satsuma Display is the most compact air-cooled femtosecond laser on the market, offering 4 individual outputs.

Satsuma Display is based on the well-known Satsuma platform - benefiting from 10 years of product improvements and feedback from installation of 1500 units in the field. The Satsuma platform's reliability and stability are internationally-recognized.

Thanks to the unique features of Satsuma Display, Amplitude enables Display leaders to operate with up to 4 different wavelengths using a single laser. It offers the possibility to optimize the quality of ablation to the highest level for every kind of materials, including metals, p-Si, ITO, isolators and polymers.

In addition, femtosecond pulses provide flexibility to deliver results for the most challenging processes, such as selective ablation, cutting, drilling and carbonization.

Upgrade your nanosecond or picosecond laser repair processes to femtosecond laser to increase your production yield.

Satsuma Display is robust, compact, light and air-cooled, making the integration smooth for gantry system designs.



## Applications

### Industry:

- > OLED and LCD array repair
- > C/F repair
- >  $\mu$ LED lift-off and repair

## Key Features

- > 4 wavelengths IR, Green, UV and DUV for processing all kind of materials including metals, p-Si, ITO, isolators and polymers
- > Femtosecond pulses for high quality thin layer removal and cutting with low HAZ
- > Air-cooled, compact, lightweight and robust for smooth integration on a gantry system

# Specifications

	IR	SHG	THG	FHG
Wavelength	1030 nm	515 nm	343 nm	257 nm
Average Power	> 5 W (20 W optional)	> 2 W (8W optional)	> 0.75 W (3W optional)	> 0.5 W (2W optional)
Pulse Energy	> 40 $\mu$ J	> 16 $\mu$ J	> 6 $\mu$ J	> 4 $\mu$ J
Repetition Rate	Single shot to 2 MHz			
Pulse Duration	< 350 fs to 10 ps			
Wavelength Switching Time	< 2 s			
Long Term Power Stability	< 1 % rms over 100 hours			
Waist Asymmetry	< 13 %			
M <sup>2</sup>	< 1.2			
Beam Pointing Stability	< 25 $\mu$ rad/°C			
Warm-up Time	< 30 min			

\*High Energy Option

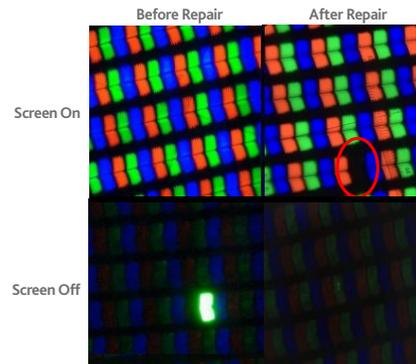
# Options

- Output power monitoring for 4 wavelengths
- Burst mode - Pulse train with 25 ns period
- Superior beam - astigmatism <10%, waist asymmetry <5%
- High amplifier repetition rate - up to 40MHz

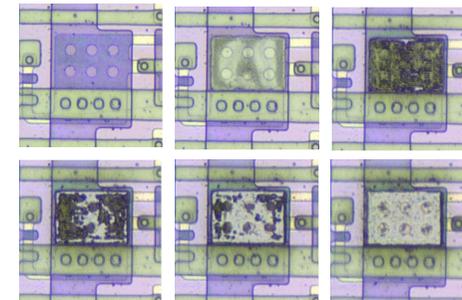


# Application Results:

C/F repair – direct method



Array repair – block removal



# Dimensions

Laser Head	52 x 33 x 19 cm
Power Supply	2U rackable

# Weight

Laser Head + HG	< 30 kg
Controller	15 kg