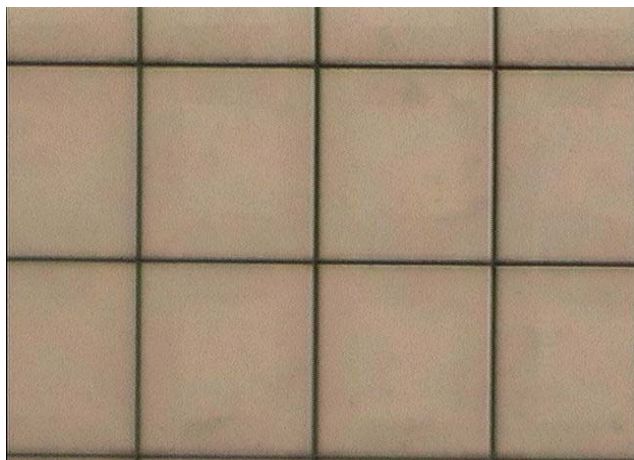


355 nm DPSS LASER SAPPHIRE SCRIBING



Blue LEDs are commonly manufactured on sapphire substrates. The use of mechanical saws frequently leads to cracks and requires large separation between devices. The use of DPSS Lasers Inc., 355 nm laser systems allow for less separation and higher yields per wafer.

A number of major manufactures for sapphire scribing have already qualified the Model 3510-50 laser system, operating at 50 kHz with an output of 1 Watt at 355 nm.



Using the Model 3510-50, the wafer is scribed to a depth of approximately 30 μm , with a line width of 6 μm . The wafer is then cleaved on the scribed lines to separate the 300 μm x 300 μm devices.

The Series 3500 UV laser combines the high peak power, short wavelength, and superior beam quality required to achieve rapid processing and high yield in sapphire scribing.

Laser Model	Average Power	Rep Rate	Scan Rate
3510-50	1 Watt @ 355 nm	50 kHz	20-80 mm/sec