

# Spectrum 20

## PRODUCT SPECIFICATION SHEET

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### DESCRIPTION

Our good old Spectrum went through vast number of changes and improvements throughout the years of its existence.

The current 2020 version of Spectrum lasers is all that success-focused laser display professional needs for large scale outdoor shows, and for whom failure is not an option.

The Spectrum range (including LD Spectrum, Spectrum RGBY and LD Spectrum RGBY product lines) represents power, precision, robustness, cutting edge technology and top of the range features, which are often unique and make the Spectrums what they are! Bright, reliable, fast-scanning and a pleasure to work with. The whole Spectrum family is based on identical and field-tested construction, making it suitable for intense touring, permanent installs, and daily hire business.

**Spectrum 20** is the entry model to our famous Spectrum product line. If you take outdoor shows seriously, this one is the least to consider. Of course, more is better, but Spectrum 20 is a great workhorse to tackle the shows at any outdoor stages and festivals. It takes advantage of excellent beam properties based on the OPSL Coherent Taipan and KVANT's pioneered semiconductor diode laser modules.

### Highlights of the Spectrum:

- 40 Kpps CT6215-MAB4 scanning as standard
- Colour Balance display mode
- robust construction
- *optional* Motorised Dichroic Filters for quick and easy beam alignment
- integrated Pangolin FB4 control interface as standard with Pangolin QuickShow 4.0 laser control and creation software included
- direct control from most lighting consoles over the ArtNet

Every KVANT laser system is delivered with a Quality Control Certificate. The certificate includes the power output measurement of each laser wavelength within the system.

### SPECIFICATIONS

<b>Source   Type:</b>	semiconductor diode & OPSL   full-colour RGB laser projector
<b>Suitability:</b>	outdoor laser displays [atmospheric, abstract, text, animations]
<b>System control:</b>	FB4-SK [Ethernet, ArtNet, DMX, ILDA   PC, Lighting Console or Autoplay]
<b>Compliant with:</b>	EN 60825-1 [tested by TÜV SÜD], FDA
<b>Weight [kg]:</b>	27
<b>Size [WxHxD, mm]:</b>	471 x 267 x 336
<b>Guaranteed opt. output [mW]:</b>	20000
<b>R   G   B [mW]:</b>	6000   8000   6000 [*see note A below]
<b>Wavelengths [nm, ±5nm]:</b>	637   532 OPSL   445
<b>Beam size [mm]:</b>	6 x 5
<b>Beam divergence [mrad]:</b>	0.89 [full angle, averaged value, *see note B below]
<b>Modulation [kHz]   type:</b>	100   analogue
<b>X-Y scanners:</b>	Juno 5   40 Kpps @ 8° [see Option below]
<b>Power requirements [V]   Input:</b>	100-230/50-60Hz   Neutrik powerCON TRUE1
<b>Max. power consumption [VA]:</b>	1200
<b>Operation temperature [°C]:</b>	10-40
<b>Included in the set:</b>	Heavy-duty flight case, 1.5M power lead, 25M Ethernet rj45 signal cable, E-STOP remote with 30M 3-pin XLR cable, set of 4 safety keys, interlock connector [for the USA only], USB memory stick with the user manual. Pangolin QuickShow laser control and creation software is available for FREE download.
<b>HW features:</b>	All the basic system settings and adjustments such as power output adjustment for each colour, X & Y axes invert, X & Y size and position, etc. are managed via the built-in FB4 control interface. Scanning system overload protection.
<b>Laser safety features:</b>	Keyed interlock, emission delay, magnetic interlock, scan-fail safety, fast electromechanical shutter [reaction time <20ms], adjustable aperture masking plate, Emergency STOP system with keyed remote and manual RESTART button.
<b>note A</b>	Due to Advanced Optical Correction technology used in Kvant systems, the real power output of each laser module installed within the system may slightly differ from its specification. This doesn't affect the total guaranteed power output of the system.
<b>note B</b>	The beam divergence total is calculated as an average arithmetic value of all individual colours. The divergence of each colour is calculated as: 1. FWHM of the beam cross-section for round beams, or 2. The arithmetic average of the beam's horizontal and vertical divergence for all rectangular beams.