

**LASER TECHNIQUE**

Specifications for

# **Laser Animator Systems**

**All Red, Green and Blue DPSS  
powers**

**CE**

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## **LASER ANIMATOR SYSTEM SPECIFICATIONS 5 to 30mW Green and 50mW Red:**

### **OPTICAL:**

Laser Source : Green DPSS laser, Red Diode laser,  
Maximum Optical Power : 5, 10, 20, 30, 50mW - 30mins to stabilise,  
Classification : 3A for powers 5mW or below, 3B for powers above 5mW,  
Wavelength : 532nm Green, 650nm Red,  
Beam Divergence : 1.5mrad Green, 2mrad Red,  
Beam Diameter : 1.0mm Green, 2 x 7mm Red  
Laser Life : 5000Hrs,  
Optics : Front surface aluminium mirrors with Anti Reflective coated output window,  
Shutter : Solid State Switching,  
Scanner Speed : 30,000 PPS,  
Scan Angle : Up to 40°.

### **POWER SUPPLY:**

Linear power supply for electronics and laser,  
210 - 250 VAC Operation,  
100 Watt power consumption.

### **CONFORMITY / SAFETY FEATURES:**

CE Conformity to : EN 55011:1991 CLASS B (conducted and radiated),  
EN 61000-4-2:1995,  
EN 61000-4-3:1995,  
EN 61000-4-8:1994,  
LOW VOLTAGE DIRECTIVE.

### **PHYSICAL:**

System Dimensions : 315 x 230 x 100mm,  
Weight : 5.5Kg,  
Operating Temperature : 5 - 40°C,  
Packaging Size : 440(l) x 395(w) x 285(h)mm,  
Packaged Weight : 9.0Kg.

**LASER ANIMATOR SYSTEM SPECIFICATIONS 50 to 600mW Green, 100 to 150mW Red, and 50 to 250mW Blue:**

**OPTICAL:**

Laser Source : DPSS YAG  
 Maximum Optical Power : 50=80mW, 100=120mW, 150=220mW, 200mW 400=450mW, 600=650mW,  
 Classification : Class 3B for 30 to 400mW, Class 4 for 600mW  
 Wavelength : 532nm green, 671nm red, 473nm blue  
 Beam Divergence : 2mrad,  
 Beam Diameter : 2mm,  
 Estimated Laser Life : 5000 Hrs for 50 to 150mW, 10000 Hrs for 250 to 600mW,  
 Optics : Front surface aluminium mirrors with Anti Reflective coated output window,  
 Shutter : Solid State Switching,  
 Scan Time : 0.5mS Exposure at 30K,  
 Galvanometers : XY set, maximum speed of 45K at small angles.

**INPUT SIGNALS (25 Way D Male):**

PIN 1 : +Y Differential Signal 10Vpp  
 PIN 2 : -Y Differential Signal 10Vpp  
 PIN 3-4 : Reserved for future use  
 PIN 5 : +X Differential Signal 10Vpp  
 PIN 6-7 : Reserved for future use  
 PIN 8 : -X Differential Signal 10Vpp  
 PIN 9-13 : Reserved for future use  
 PIN 14-19 : 0V  
 PIN 20 : Blanking Signal TTL (0V Low, +5V High, 10mA sink) Reversible  
 PIN 21 : Colour Bit 4 TTL (0V Low, +5V High, 10mA sink)  
 PIN 22 : Colour Bit 3 TTL (0V Low, +5V High, 10mA sink)  
 PIN 23 : Colour Bit 2 TTL (0V Low, +5V High, 10mA sink)  
 PIN 24 : Colour Bit 1 TTL (0V Low, +5V High, 10mA sink)  
 PIN 25 : Reserved for future use

**INPUT SIGNALS (9 Way D Male):**

PIN 1-9 : Not Used

**POWER SUPPLY:**

Linear power supply for electronics and laser,  
 210 - 250 VAC Operation,  
 150 Watt power consumption for 30 to 200mW (Fuse at 1.6A DELAY 250VAC 20mm),  
 250 Watt power consumption for 400 to 600mW (Fuse at 2A DELAY 250VAC 20mm).

**CONFORMITY:**

CE Conformity to : EN 55011:1991 CLASS B (conducted and radiated), EN 61000-4-2:1995,  
 EN 61000-4-3:1995, EN 61000-4-8:1994, LOW VOLTAGE DIRECTIVE,

Recommended viewing distances for audience scanning. Note that these energy densities are approximate calculations based on the information provided in the HS(G)95 guide book.

Laser Power (mW)	MPE Energy Level (J/m <sup>2</sup> )	Safe Viewing Distance (m) in no Smoke and Energy Level (J/m <sup>2</sup> )	Safe Viewing Distance (m) in Low Density Smoke and Energy Level (J/m <sup>2</sup> )	Safe Viewing Distance (m) in Medium Density Smoke and Energy Level (J/m <sup>2</sup> )
50	0.060	9.4, 0.059	5.4, 0.058	3.4, 0.060
80	0.060	12.1, 0.060	6.2, 0.060	3.9, 0.055
100	0.060	13.6, 0.060	6.6, 0.059	4.1, 0.054
200	0.060	19.7, 0.060	7.7, 0.056	4.5, 0.059
400	0.060	28.2, 0.060	8.5, 0.054	4.9, 0.044
600	0.060	34.8, 0.060	8.8, 0.054	5.0, 0.043

X or Y Scanner failure protection. If X or Y scanners fail, laser source will be shut down. Typical response time 2-5mS.

**PHYSICAL:**

System Dimensions : 470(l) x 310(w) x 120(h)mm,  
 Weight : 11.0Kg  
 Operating Temperature : 5-35°C  
 Packaging Size : 810(l) x 290(w) x 500(h)mm,  
 Packaged Weight : 18.0Kg (including software and interface).

**LASER ANIMATOR SYSTEM SPECIFICATIONS 1W to 5W Green:**

**OPTICAL:**

Laser Source : DPSS YAG  
 Maximum Optical Power : 1W = 1.3W, 3W = 3.4W, 5W = 5.5W  
 Classification : Class 4  
 Wavelength : 532nm,  
 Beam Divergence : 0.5mrad for 1W, <0.8mrad for 3/5W,  
 Beam Diameter : 2.5mm for 1W, 2.8mm for 3/5W,  
 Estimated Laser Life : 10000 Hrs,  
 Optics : Front surface aluminium mirrors with Anti Reflective coated output window,  
 Shutter : Solid State Switching,  
 Scan Time : 0.5mS Exposure at 30K,  
 Galvanometers : XY set, maximum speed of 45K at small angles.

**INPUT SIGNALS (25 Way D Male):**

PIN 1 : +Y Differential Signal 20Vpp  
 PIN 2 : -Y Differential Signal 20Vpp  
 PIN 3-4 : Reserved for future use  
 PIN 5 : +X Differential Signal 20Vpp  
 PIN 6-7 : Reserved for future use  
 PIN 8 : -X Differential Signal 20Vpp  
 PIN 9-13 : Reserved for future use  
 PIN 14-19 : 0V  
 PIN 20 : Blanking Signal TTL (0V Low, +5V High, 10mA sink) Reversible  
 PIN 21 : Colour Bit 4 TTL (0V Low, +5V High, 10mA sink)  
 PIN 22 : Colour Bit 3 TTL (0V Low, +5V High, 10mA sink)  
 PIN 23 : Colour Bit 2 TTL (0V Low, +5V High, 10mA sink)  
 PIN 24 : Colour Bit 1 TTL (0V Low, +5V High, 10mA sink)  
 PIN 25 : Reserved for future use

**INPUT SIGNALS (9 Way D Male):**

PIN 1-9 : Not Used

**POWER SUPPLY:**

Linear power supply for electronics and laser,  
 210 - 250 VAC Operation,  
 250 Watt power consumption for 1W,  
 500 Watt power consumption for 3/5W.

**CONFORMITY:**

CE Conformity to : EN 55011:1991 CLASS B (conducted and radiated), EN 61000-4-2:1995,  
 EN 61000-4-3:1995, EN 61000-4-8:1994, LOW VOLTAGE DIRECTIVE,

Recommended viewing distances for audience scanning. Note that these energy densities are approximate calculations based on the information provided in the HS(G)95 guide book.

Laser Power (W)	MPE Energy Level (J/m <sup>2</sup> )	Safe Viewing Distance (m) in no Smoke and Energy Level (J/m <sup>2</sup> )	Safe Viewing Distance (m) in Low Density Smoke and Energy Level (J/m <sup>2</sup> )	Safe Viewing Distance (m) in Medium Density Smoke and Energy Level (J/m <sup>2</sup> )
1	0.060	211.0, 0.06	9.6, 0.007	5.2, 0.001
3	0.060	211.0, 0.06	9.7, 0.001	5.2, 0.001
5	0.060	274.0, 0.06	9.7, 0.001	5.2, 0.001

X or Y Scanner failure protection. If X or Y scanners fail, laser source will be shut down. Typical response time 2-5mS.