



# Dok-Tek Systems Ltd.

Tel: [+44] 01 179 145 510

D7D Avondale Works, Woodland Way, Bristol. England. UK (GB). BS15 1PA

Fax: [+44] 01 179 145 103

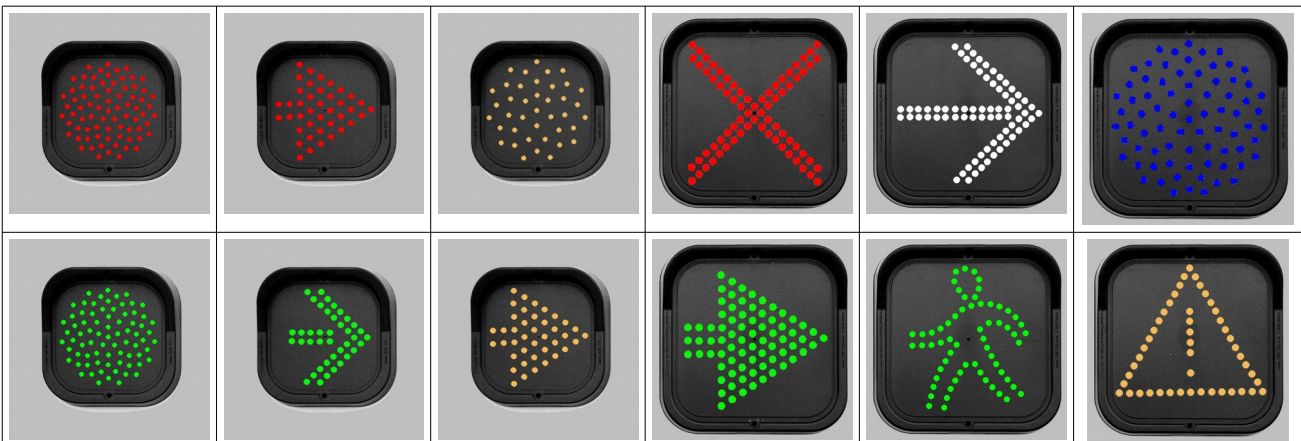
Web: www.dok-tek.co.uk / e-mail: main.doktek@gmail.com

**UK  
CA**

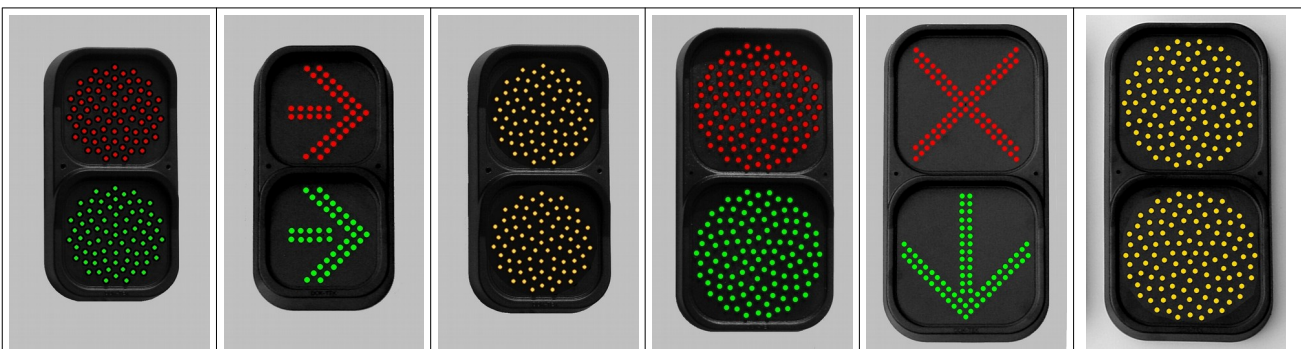
## P1 SINGLE S, & P2 Twins

Traffic / Signal light - Ultra bright LED

WTO – HS Commodity Code: 8530800000



EC European Community Registered Design 000774724 - © Copyright October 2006.  
WT)-HS Commodity Code: 8530800000



EC European Community Registered Design 000321161 - © Copyright October 2004.  
WTO – HS Commodity Code: 8530800000

### Construction:

Either 5mm (T-1 3/4) or 3mm (T-1) LED's are used.

The LED's are mounted through holes in the front of the moulding.

LED's are 40° Standard viewing angle with an option for 10°.

Black ABS injection moulded housing as stand with the option of tough Black Polycarbonate.

Many options for Array shapes and intensity choice by the quantity of LED's in the array.

All electronic components are fully potted and are thus immersible.

The LED's have resistive ballasts in series to limit the loading at the voltage requested.

All units operate only at extra low voltage.

For Safety Critical installations, can be manufactured as independant dual circuits (+E)

Place of manufacture: Dok-Tek Systems Ltd. D7D Avondale Works, Woodland Way, Bristol. England. UK (GB). BS15 1PA

**UK Legislation:**

T1 Singles, T2 Twins &amp; L1 Twins products comply with the following legislation:

## Electromagnetic Compatibility Regulations 2016

EN 61000-6-3 - Emission standard for commercial & light-industrial environments.  
Emissions = Benign.

EN 61000-6-1 - Immunity standard for commercial and light-industrial environments

RFI Conducted Transmissions:

Voltage type: U\*\*vDC = Vulnerable. No Protection.

Voltage type: CR\*\*vDC = Protected ( $\geq 5\text{KHz}$ ).

RFI Radiated Transmissions:

All types = Vulnerable. No protection

## The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (UKSI 2012 # 3032)



Restriction Of Hazardous Substances - Not Applicable – Does not contain:

Lead (Pb). Mercury (Hg). Cadmium (Cd). Hexavalent chromium (Cr6+). Polybrominated biphenyls (PBB). Butyl benzyl phthalate (BBP). Polybrominated diphenyl ether (PBDE). Bis(2-ethylhexyl) phthalate (DEHP). Dibutyl phthalate (DBP). Diisobutyl phthalate (DIBP)

## The Waste Electrical and Electronic Equipment Regulations 2013 (UKSI 2013 # 3113)



Category 9: Monitoring &amp; control equipment

Registered WEEE producer under Valpak Ltd membership RM10296.

Separate, recover &amp; recycle.

Potting compound inert.

## The Packaging (Essential Requirements) Regulations 2015 (SI 2015/1640)



Product Packaging meets BS EN 13432:2000 &amp; is home compostable.

Comment: *Low Voltage Directive 2014/35 - Electrical Equipment (Safety) Regulations 2016**Does not apply - Equipment meets requirements of IEC 60038 - Extra low voltage.*Comment: *The Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019**Annex 3.1 The information requirements do not apply because the LED's are part of a luminaire from which they are not intended to be removed by the end user.*Comments: *The Supply of Machinery (Safety) Regulations (SI 2008/1597) EN 62061 /IEC 62061 - Outside of Dok-Tek Systems Ltd.control.***Important. Supply Voltage:**PELV / SELV extra low voltage only. Over Voltage = LED failure -  
Use only regulated power supplies

Voltage limits by type:

U24vDC ( $\pm 1.5\text{v}$ )CR24vDC ( $\pm 3\text{v}$ )CR12vDC ( $\pm 1.5\text{v}$ )*Note: Colours to be used with machinery or safety critical installations (EN60204-1).**Red = Stop / Emergency; dangerous condition .**Yellow = Warning or abnormal condition.**Green = Proceed or Normal condtion.**Blue = Forcing action required**White = Neutral or other use.*Recommended Mounting height  
/ Viewing Distance.

Intense LED Light

For a direct view - Recommended minimum viewing distance:

d = 20-50 LED = +5M / 50-80 LED = +10M / 80+ LED = +20M

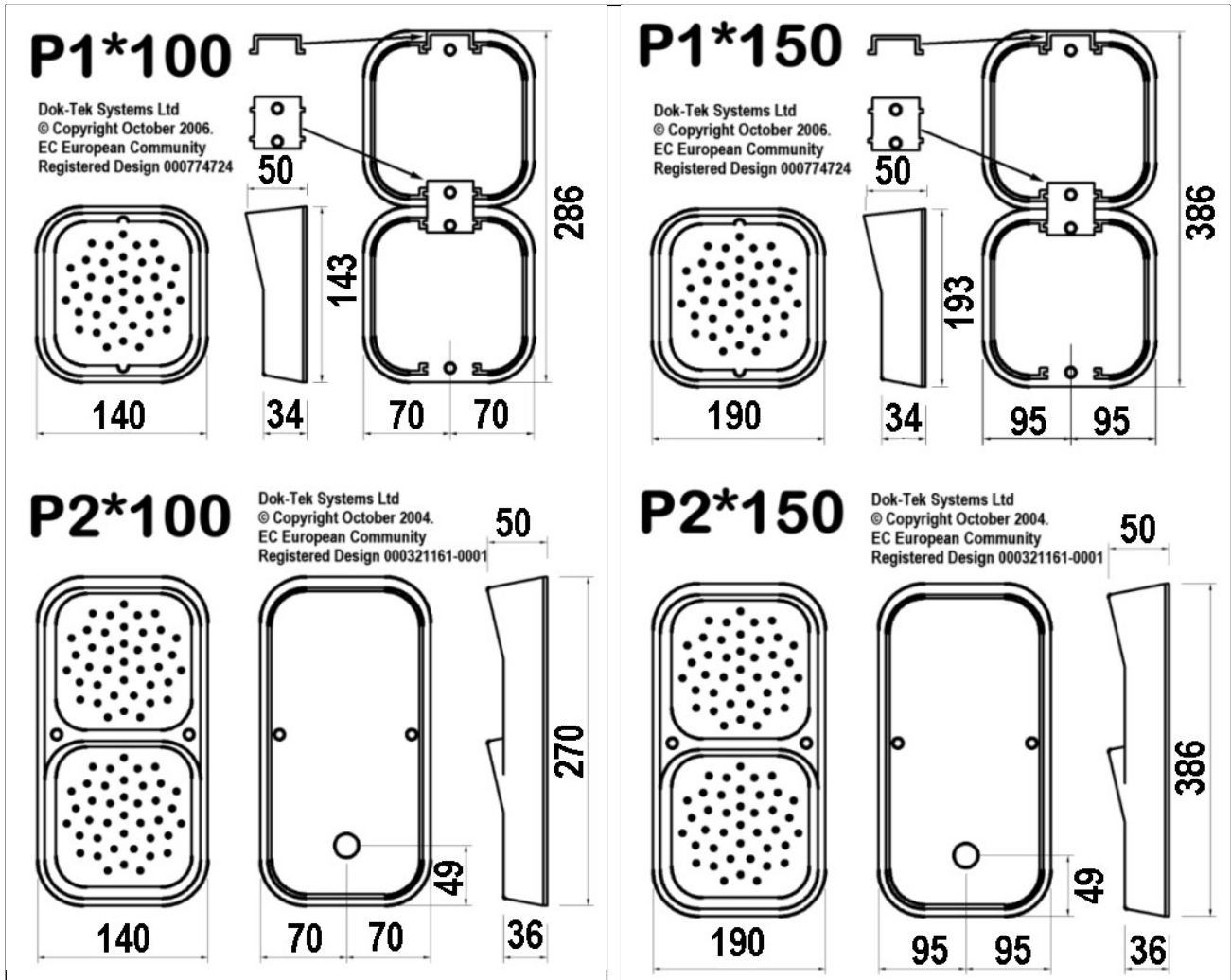
Temperature limits:

Installation = +5°C to +30°C / In service = -15°C to +40°C

Service Life:

Shade = +15 Years / Sunlight = +10 Years (UV deterioration).

# Housing Dimensions



**Cable & Connections - Each array has an Individual core pair.**

Figure 8 Cable - BS EN 50363-3 Type T12 - 2182X 300 v / -15°C to +60°C. 0.5mm <sup>2</sup> 16/0.2 conductors (3 Amp)	Pair 1 (top)			
	Pair 2			
NATO Defence Standard Round Cable (Def Stan) 61-12 (Pt 4 / Pt 5) 0.5mm <sup>2</sup> 16/0.2 conductors (3 Amp) Flame-BS4066 PT1 / IEC 332 PT1 440 v / -55°C to +70°C.		Pair 1 (top)	Pair 2	Pair 3
	= +ve			
= -ve				

IEC 60529, EN 60 529. Front assembly IP680 – Components fully potted & is immersible.  
 Rear cavity IP400 water can ingress – Protect cavity with sealant (not provided).

**W / V / A - [Tests at : 20° C / Uv= + 1.5% / Crv = +3%]**

* = LED Colour / Couleur / Farbe. Colore. Color.		R	G	A	B	W
V / W / mA		Red / Rouge / Rot / Rosso / Rojo / Vermelho	Green / Vert / Grün / Verde	Amber / Jaune / Gelb / Giallo / Amarillo / Geel	Blue / Bleu / Blau / Blu / Azul / Blauw	White / Blanc / Weiß / Bianca / Blanco / Wit
40 LED P**100*	U24vDC (± 1.5v)	192mA / 4.68W	168mA / 4.1W	270mA / 6.6W	233mA / 5.6W	169mA / 4.2W
	CR24vDC (± 3v)	250mA / 6.18W	230mA / 5.7W	263mA / 6.3W	267mA / 6.4W	250mA / 6.2W
	CR12vDC (± 1.5v)	250mA / 3.1W	310mA / 3.9W	280mA / 3.5W	481mA / 6.0W	496mA / 6.2W
76 LED P**100* P**150*	U24vDC (± 1.5v)	316mA / 7.7W	291mA / 7.1W	368mA / 8.8W	448mA / 10.8W	320mA / 7.9W
	CR24vDC (± 3v)	431mA / 10.7W	412mA / 10.2W	483mA / 10.5W	444mA / 10.7W	342mA / 8.5W
	CR12vDC (± 1.5v)	426mA / 5.3W	572mA / 7.1W	506mA / 6.3W	914mA / 11.3W	943mA / 11.7W
≤ 111 LED P**150*	U24vDC (± 1.5v)	450mA / 11.0W	378mA / 9.2W	530mA / 12.8W	640mA / 15.4W	480mA / 11.9W
	CR24vDC (± 3v)	648mA / 16.0W	594mA / 14.7W	700mA / 16.8W	690mA / 16.6W	504mA / 12.5W
	CR12vDC (± 1.5v)	630mA / 7.8W	699mA / 8.7W	745mA / 9.2W	1347mA / 16.7W	1388mA / 17.2W

**Array Shapes / Qty LED's (Singles or Twins)**

Custom Arrays Can Be Manufactured -

Previously manufactured specials: Tram Signal – 2 way crossed bars. £, €, Hourglass & Emogees.

Circular	X	Green Man	Red Man	P**150STOP	Tick	Waterslide	Hazard
P**100e = 40 P**100h = 76 P**150e = 76 P**150h = 111	P**100x = 40 P**150x = 76	P**G100m = 40 P**G150m = 64	P**R100m = 40 P**R150m = 56	P**150STOP = 58	P**100TCK P**150TCK	P**R100sldr = 40	P**A100haz = 40 P**A150haz = 56

Arrow North	Arrow NE	Arrow East	Arrow SE	Arrow South	Arrow SW	Arrow West	Arrow NW
P**100AN P**150AN	P**100AE P**150AE	P**100AE P**150AE	P**100AS P**150AS	P**100AS P**150AS	P**100AS P**150AS	P**100AW P**150AW	P**100AW P**150AW

Pointer North	Pointer NE	Pointer East	Pointer SE	Pointer South	Pointer SW	Pointer West	Pointer NW
P**100PN P**150PN	P**100PNE P**150PNE	P**100PE P**150PE	P**100PSE P**150PSE	P**100PS P**150PS	P**100PSW P**150PSW	P**100PW P**150PW	P**100PNW P**150PNW

	<b>Dok-Tek Systems Ltd.</b>	Web: <a href="http://www.dok-tek.co.uk">www.dok-tek.co.uk</a>
	Tel: [+44] 01 179 145 510	e-mail: <a href="mailto:main.doktek@gmail.com">main.doktek@gmail.com</a>
	D7D Avondale Works, Woodland Way, Bristol. UK (GB). BS15 1PA	