



STANDARD OPERATING PROCEDURE

Ref:	SOP-0201-01-N-DEV
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Description:	MK4 Lamp-holder Starpoint Technical Information
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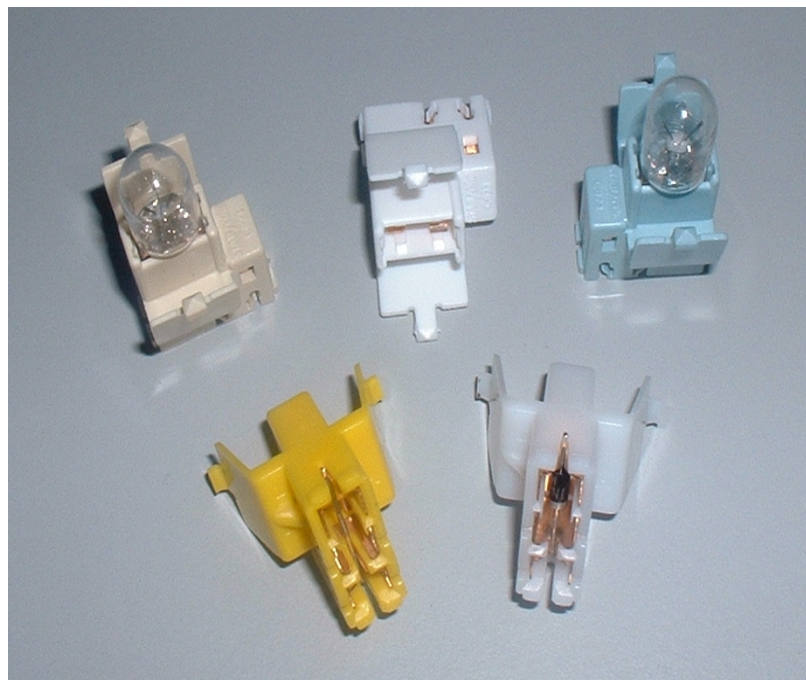
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LAMP HOLDER

Mk. 4





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INTRODUCTION

The Starpoint 10mm wedge based IDC (Insulation Displacement Connection) Lamp Holder is a plastic injection moulded unit with flexible wings designed for quick & easy installation & removal in panels.

The lamp holders take 10mm wedge based lamps & can be terminated rapidly using Starpoint's air insertion tool or hand tool.

There are 5 types for 7/0.2 & 13/0.2 wire, with and without integral diode, these are designated by colour of moulding.



CONDITIONS OF USE

1. Temperature Range

The mechanism will operate satisfactorily in the temperature range from 0°C to 90°C, provided there is an unrestricted flow of air and proper motor control is exercised.

2. Operational Environment

It is recommended that the lamp holder is not operated in an exposed environment if the public are present. The most suitable method of operation should be behind a glass or screen.

3. Tools & Installation

Tools are not required for the installation or removal of the unit, as lamp holder is clip in. Lamp holders can be wire by Starpoint Air Gun, for one shot insertion or Hand insertion tool.

4. Warranty

A guarantee of 12 months from the shipment date is available for the lamp holders, subject to Starpoint's standard terms and conditions. Any lamp holder, which may require return under guarantee, should be returned directly to Starpoint or the local distributor.



MECHANICAL SPECIFICATION

1. **Assembly**

Details of overall dimension's & mounting details can be found on drawings listed in Appendix A.

2. **Panel Mounting**

The lamp holder is designed to fit in a panel thickness of 1mm to 2mm. The flexible wings are designed to snap firmly into place though 17mm to 19mm holes to give easy & fast fitting & removal.

3. **Wire Insertion**

Termination of the wires can be made with the Starpoint Custom designed air cylinder part No. F6S032-01-ZZZZ and Mk.4 Lamp holder IDC Head – Part No. F6S030-01-ZZZZ. For hand insertion and removal of wiring a moulded insertion/extraction tool is available – Part No. 31S004-01-AERD.

4. **Flammability**

The Mk4. lamp holder has version available in Flame Retardant nylon material – 7LHD/1. Part No. B9S004-01-ZZZZ.

5. **Product Identification**

For ease of product identification the lamp holder are colour coded as shown in Appendix A.

ELECTRICAL SPECIFICATION

1. Lamp Type

The Mk 4 Lamp holder is designed for a T3¼, 10mm wedge based lamp up to 3W.

2. Wire Types

There are 5 types of lamp holder that are designed to accept termination with 7/0.2 & 13/0.2 wire. See Appendix A

3. Wiring Method - Matrixing

To connect a large number of lamps would mean a very large wiring harness. It is possible to reduce the number of wires by introducing a diode into each lamp circuit and creating a matrix of wires on the lamps. Then by selection on the matrix a single lamp can be illuminated. For instance 64 lamps can be controlled from 16 wires.

Appendix B shows a sub set of a matrix where D1 to D8 are the circuits which control which lamp is illuminated. As an example, if we assume the lamps are 5v, in a quiescent state where no lamps are to be lit the driver circuits D1 to D4 have outputs at + 5v and driver circuits D5 to D8 have outputs at 0v. Because the diodes are in the circuit of the lamps and reversed biased the lamps will not be illuminated.

If for instance you wish to light LP6 the output to driver circuit D2 must be taken to a zero volts and the output to driver circuit D6 must be taken to +5v. Similarly if you wish to only light LP11 return all driver circuits to the quiescent condition. Change the output to driver circuit D3 to zero volts and the output to driver circuit D7 to + 5v, LP11 will light.

It is also possible to light more than one lamp at the same time, but care must be taken that additional lamps are not lit. For instance, to light lamps LP5, LP7 and LP8. Output to driver circuit D2 must be taken to zero volts and the output to driver circuits D5, D7 and D8 must be taken to +5v. Alternatively, if three lamps LP5, LP7 and LP15 were to be lit. Output to driver circuits D2 with D4 must be taken to zero volts and the outputs to driver circuits D7 and D5 must be taken to +5v. But this also means lamp LP13 will light.



ORDERING INFORMATION

1. Part Numbers without Bulb

Lamp Holder Type	Part Number
7LHD	B9S005-01-ZZZZ
7LHL	B9S003-01-ZZZZ
13LHD	B9S011-01-ZZZZ
13LHL	B9S012-01-ZZZZ
7LHD/1 - FR	B9S004-01-ZZZZ

2. Part Numbers with Bulb

Lamp Holder	Lamp Holder Type		Bulb Type	
	A	7LHD	01	6.3v. 0.25A
	B	7LHL	02	12v. 2.2w
XB	C	13LHD	03	14v. 0.19A
	D	13LHL	04	24v. 2w.
	E	7LHD/1 – Flame Retardant	05	12v. 1.2w.
			08	14v. 0.80A
			41	6.3v 0.15A
			07	14v. 0.27A

Example Order Code – XBB05 – Consists of 7LHL Lamp holder & 12v 1.2w bulb.

	Lamp Holder Type		Bulb Type	
XB	B	7LHL	05	12v 1.2w



CARRIAGE & DISTRIBUTION

The lamp holders are available in the following box quantities:-

3,000 without bulb – Box size. 325 x 390 x 280 approx.
2,500 with bulb fitted – Box size. 325 x 390 x 280 approx.



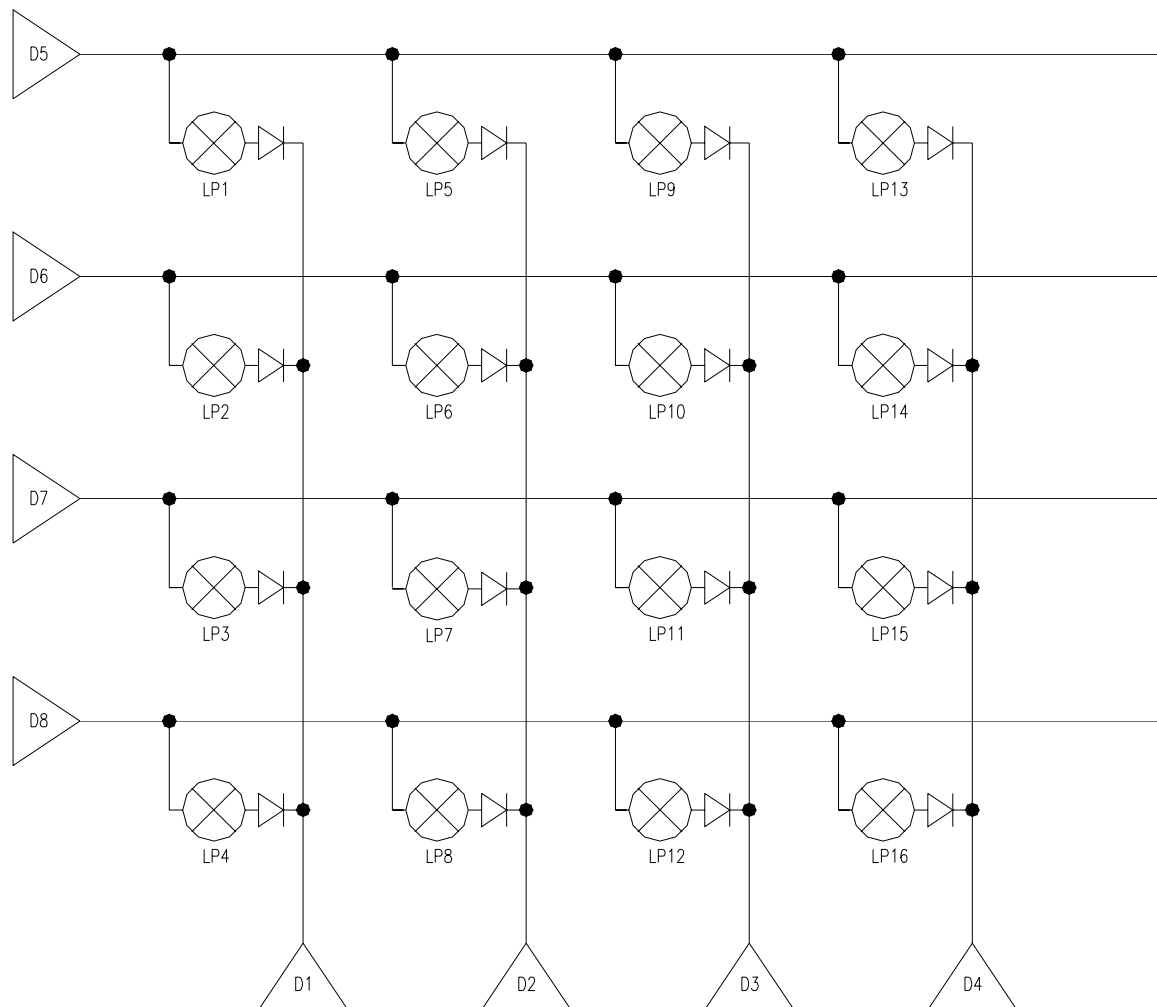
Appendix A

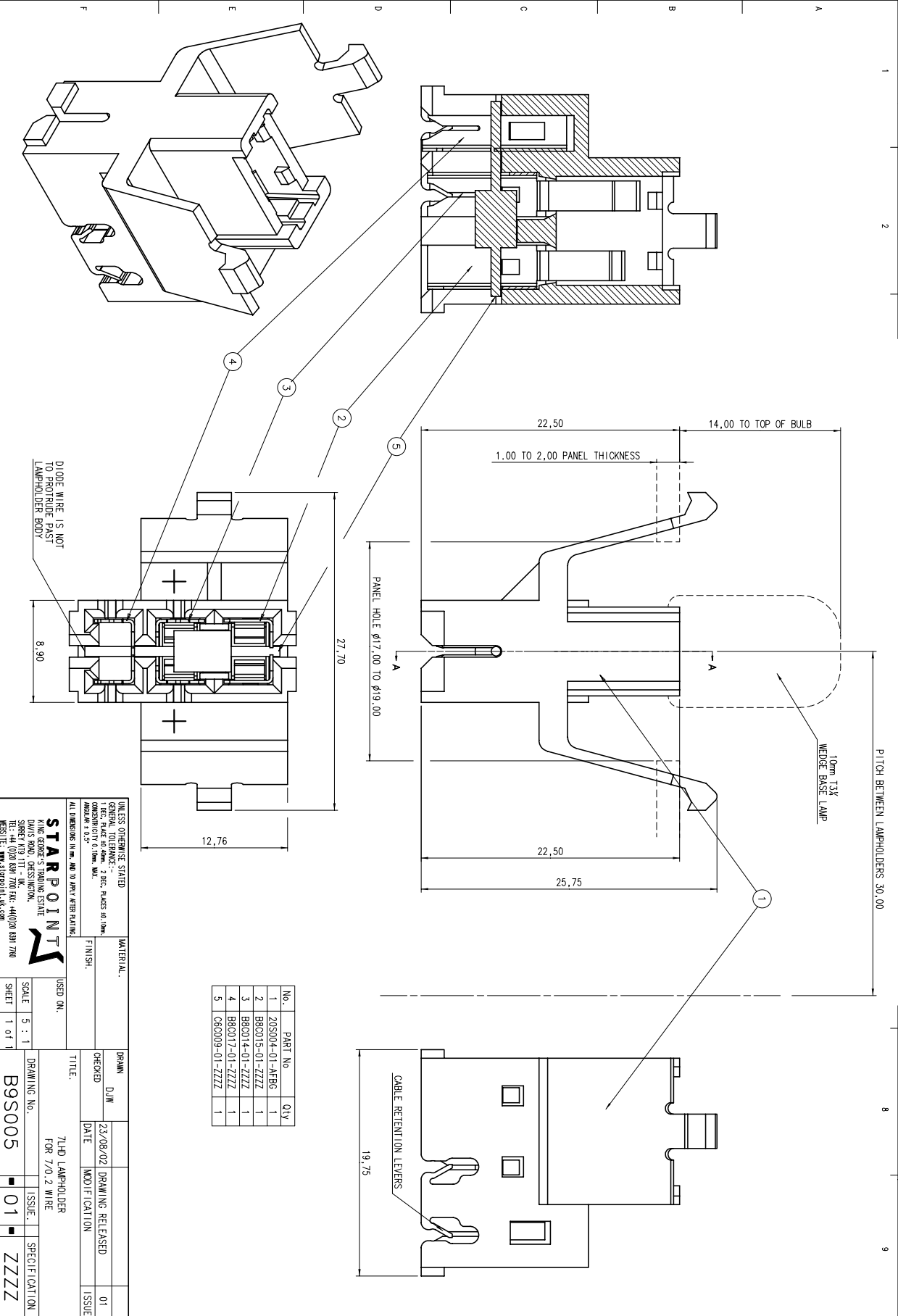
TYPES OF LAMP HOLDER

Type of Lamp Holder	Bulb Size	Diode / Link	Part / Drawing No.	Wire Size	Identification Colour Code
7LHD	10mm	Diode	B9S005-01-ZZZZ	7/0.2	Beige
7LHL	10mm	Link	B9S003-01-ZZZZ	7/0.2	Yellow
13LHD	10mm	Diode	B9S011-01-ZZZZ	13/0.2	White
13LHL	10mm	Link	B9S012-01-ZZZZ	13/0.2	Blue
Flame Retardant					
7LHD/1	10mm	Diode	B9S004-01-ZZZZ	7/0.2	Natural

Appendix B

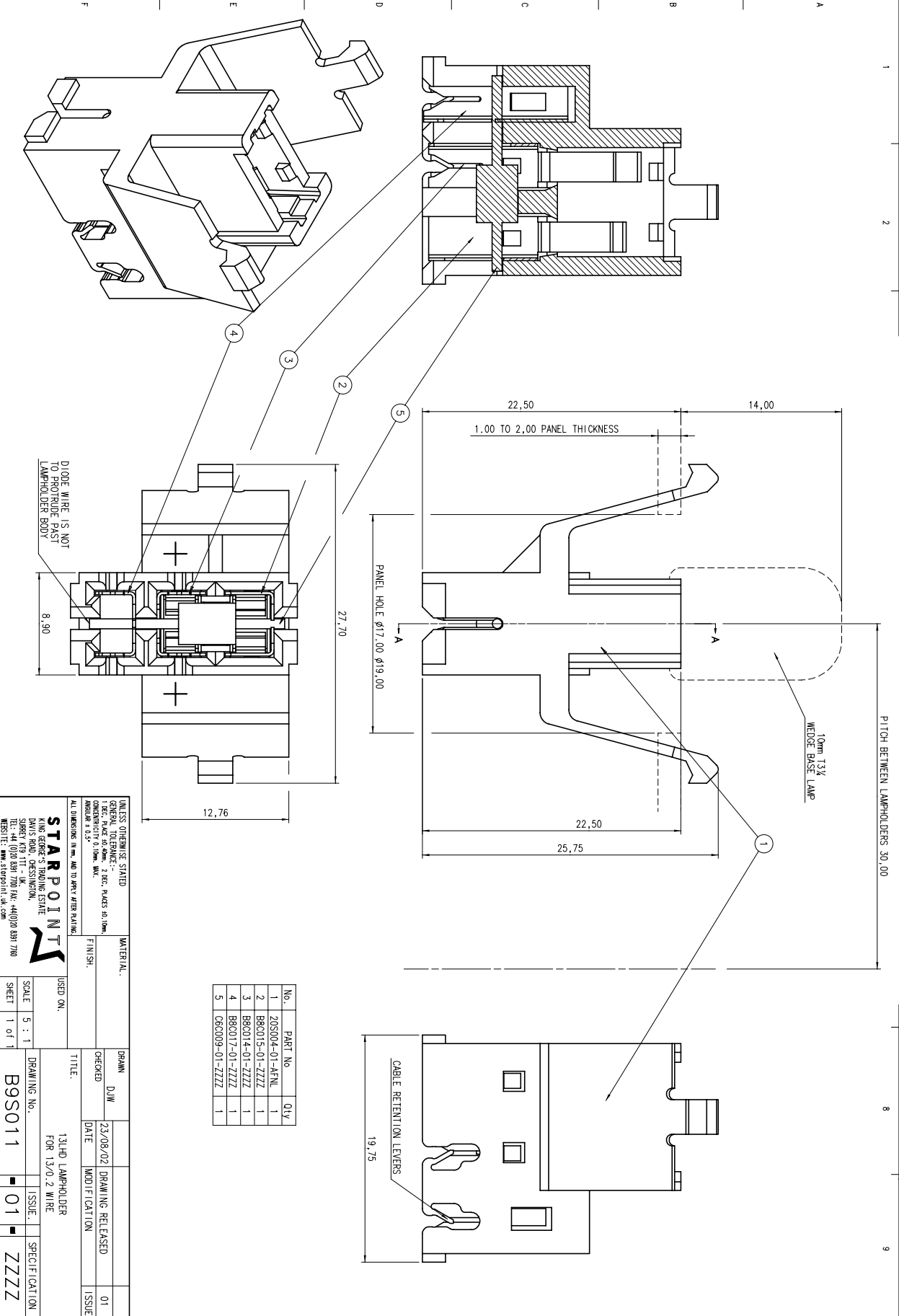
LAMP MATRIXING DIAGRAM

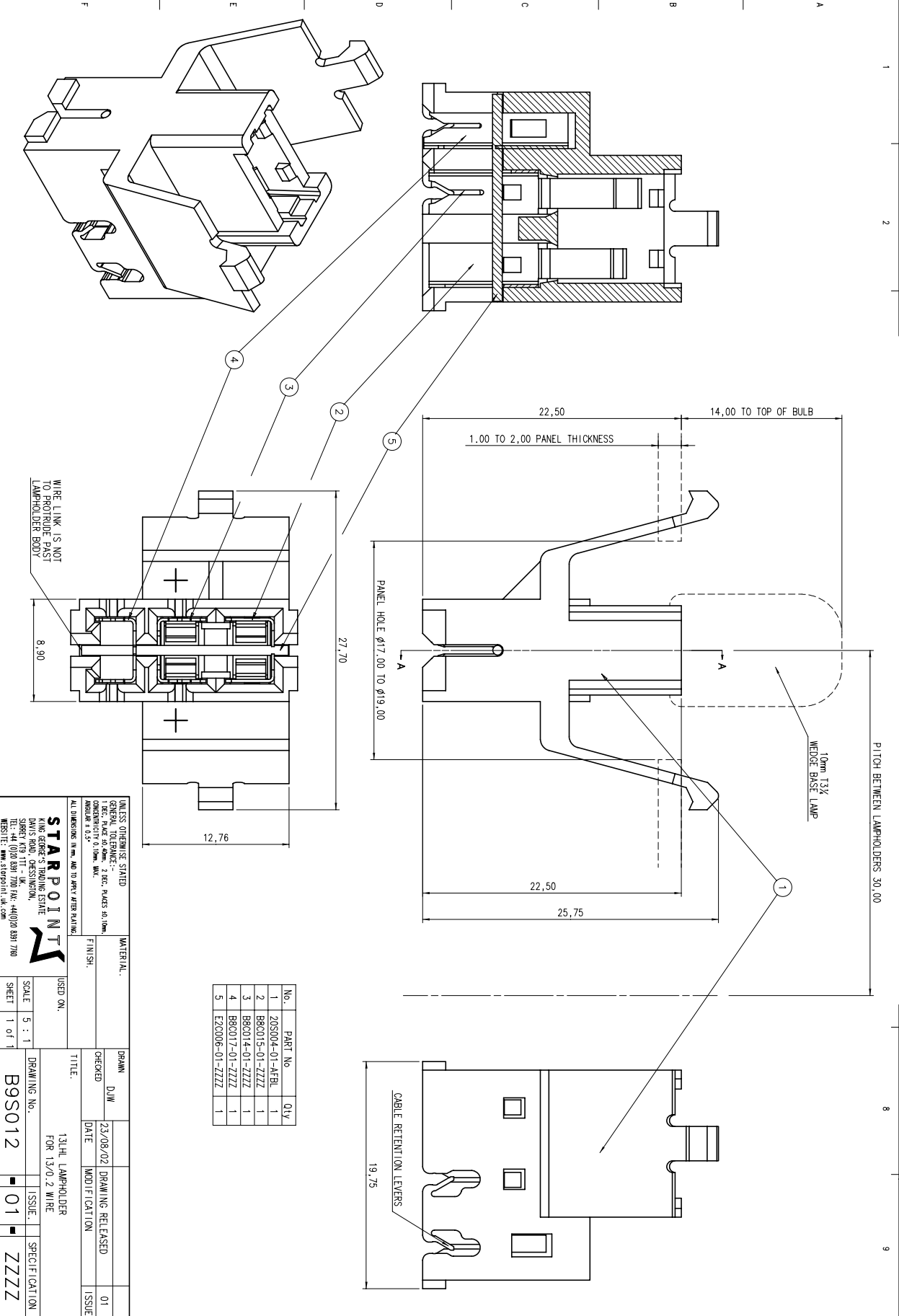




UNLESS OTHERWISE STATED		MATERIAL	
GENERAL TOLERANCE: ±1			
1 DEC. PLACE TO 0.0mm, 2 DEC. PLACES TO 0.1mm			
CONDUCTIVITY 0.10mm MAX.			
FINISH			
ALL DIMENSIONS IN MM, AND TO APPLY AFTER PLATING			
ASSEMBLY			
USED ON:			
TITLE:			
DRAWN			
DATE			
MODIFICATION			
ISSUE			
CHECKED			
DATE			
MODIFICATION			
ISSUE			
DRAWING No.			
FOR 7/0.2 WIRE			
SPECIFICATION			
SCALE			
SHEET			
1 of 1			
B9S005			
01			
ZZZZ			

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WEBSITE: www.starpoint.lk.com





No.	PART No	Qty
1	20S004-01-AFBL	1
2	B8C015-01-ZZZZ	1
3	B8C014-01-ZZZZ	1
4	B8C017-01-ZZZZ	1
5	E2C006-01-ZZZZ	1

UNLESS OTHERWISE STATED

GENERAL TOLERANCE: ± 0,10mm

FINISH: ANGULARITY ± 0,5°

ALL DIMENSIONS IN mm AND TO APPLY AFTER RATING

MATERIAL:

FINISH:

USED ON:

DRAWN: DJW

CHECKED: DATE

MODIFICATION

ISSUE

TITLE:

13HL LAMPHOLDER

FOR 13/0,2 WIRE

DRAWING No.

B9S012

01

ZZZZ

SCALE: 5 : 1

SHEET: 1 of 1

STARPOINT

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