

## 20.0MM ELLIPTICAL ORTHOGONAL TIR

**Status** Production  
**Part no.** 10192  
**Drawing no.** 60430  
**Product type** Assembly  
**Type** TIR  
**Pieces** 1  
**Diameter** 20.0  
**Height** 9.90  
**Beam** Elliptical Orthogonal



**Flange** Yes  
**Files** [Customer drawing \(PDF\)](#)  
[Customer 3D model \(.igs\)](#)

LEDs & Performances	Eff.	FWHM	Cd/lm	Spot	Cross-section	Files
Cree XP-G XLamp® White	85.5%	47.1 x 12.6	4.5			10192_cree_xpg_white_250408.ies
Cree MX-6 XLamp® White	89.7%	46.4 x 19.6	3.0			10192_cree_MX6_white_250408.ies
SSC Z1 White	83.3%	46.0 x 22.3	2.6			10192_Seoul_Z1_white_250408.ies
Osram Plus W5AM Dragon Cool White	86.0%	10.5x46.6	5.3			10192_Osram_Dragon_PLus_CoolWhite_250408.ies 10192_Osram_Dragon_PLus_CoolWhite_250408.ltd
SSC P4 Cool White	81.0%	14 x 49	2.1			10192_Seoul_P4_Cool_White_250408.ies
Osram SSL 80 degree Oslon Ultra White	85.1%	47.6x8	6.2			10192_Oslon_wht_250408.ltd 10192_Oslon_wht_250408.ies
Nichia NCSL 119-H3 Top Emitting Warm White	86.5%	9.7x47.3	5.9			10192_Nichia_119_WarmWhite_250408.ies
SSC Z5 Cool White	85.7%	8.5 x 48.3	5.9			10192_Seoul_Z5_white_250408.ies
LedEngin 3W White	83.8%	18.2 x 47.1	2.8			10192_LedEngin_3W_white_250408.ies
LedEngin 5W White	83.4%	17 x 46.5	2.9			10192_LedEngin_5W_white_250408.ies

Luminus Devices SST-50 White	83.6%	25.5 x 44.5	2.5			10192_Luminus_SST50_White_250408.ies
Everlight Shuen Warm White	85.3%	46.4	4.7			10192_Shuen_wwht_250408.ies
Everlight Shuen Cool White	85.5%	47.2	4.4			10192_Shuen_cwht_250408.ies
Avago Jade Cool White	90.1%	13.7 x 47.1	4.0			10192_Avago_Jade_cool white_250408.ies
Lumileds C Luxeon Cool White	84.5%	6.3 x 48.6	7.7			10192_Luxeon C_white_250408.ies
SSC P4 Version 7 Cool White	82.7%	14.8 x 47.1	3.6			10192_Seoul_New_P4_Pure_White_250408.ies
Cree XM-L XLamp® White	84.5%	17.8 x 46.0	3.5			10192_Cree_XM-L_white_31-01-11.ies
Cree XM-L - EZW Warm White	85.5%	20.5 x 45.2	3.1			10192_Cree_XM-L - EZW_warm white_200511.ies
Cree XP-C White	86.1%	6 x 49.1	8.6			10192_Cree_XP-C_white_270611.ies
Osram SSL 150 degree Oslon Neutral White	86.0%	48.62x8.426.9				10192_Oslon 150_neutral white_280711.ies
SSC Z5P pure white	%	48.3 x 10.0	5.7			10192_Z5P_pure white_270911.ies

Related Holders & LEDs	Avago Jade Cool White	Cree MX-6 XLamp White	Cree XM-L - 2W Warm White	Cree XM-L XLamp White	Cree XP-C White	Cree XP-G XLamp White	Everlight Shuen Cool White	Everlight Shuen Warm White	Overlight 3W White	Light Engine 5W White	Engel Luxeon Cool White	Lumileds SST-50 White	Lumileds SST-50 Warm White	Nichia Top Emitting Warm White	NCSL H3 W5AM Dragon Cool White	Osram Plus SSL 150 degree Neutral White	Osram Plus SSL 80 degree Ultra White	Dsram P4 Cool White	SSC P4 Version 7 Cool White	SSC Z1 White	SSC Z5 Cool White	SSC Z5M Warm White	SSC Z5P pure white		
10148 20.0mm Circular Black															✓										
10148-TS 20.0mm Self Adhesive (TS) Black															✓										
10149 20.0mm Circular Clear															✓										
10149-TS 20.0mm Self Adhesive (TS) Clear															✓										
10150 20.0mm Circular White															✓										
10150-TS 20.0mm Self Adhesive (TS) White															✓										
10236-TS 20.0mm Self Adhesive (TS) White																									
10237-TS 20.0mm Self Adhesive (TS) Clear																									
10273 50.0mm Triple White																			✓	✓					
10276 50.0mm Triple White															✓										
10283 50.0mm Triple White																			✓	✓					
10286 50.0mm Triple White															✓										
10293 50.0mm Triple Black																			✓	✓					
10296 50.0mm Triple Black															✓										
10303 50.0mm Triple Black																			✓	✓					
10306 50.0mm Circular Black															✓										
10363 20.0mm Circular Black																			✓	✓					
10363-TS 20.0mm Self Adhesive (TS) Black																			✓	✓					
10364 20.0mm Circular White																			✓	✓					
10365 20.0mm Circular Clear																			✓	✓					
10630 20.0mm Universal White																							✓		
10631 20.0mm Universal White	✓									✓					✓										
10632 20.0mm Universal White					✓		✓	✓				✓					✓	✓							✓
10634 20.0mm Universal White									✓																
10637 20.0mm Universal White		✓																							
10650 20.0mm Universal White																								✓	
10651 20.0mm Universal White	✓														✓										
10652 20.0mm Universal White					✓		✓	✓				✓					✓	✓							✓
10654 20.0mm Universal White									✓																
10657 20.0mm Universal White		✓																							
10670 20.0mm Universal White																								✓	
10671 20.0mm Universal White	✓														✓										
10672 20.0mm Universal White					✓		✓	✓				✓					✓	✓							✓
10674 20.0mm Universal White									✓															✓	
10677 20.0mm Universal White		✓																							



## General Instruction - Taped Holders

### [Click here to view the 3M Technical Data Sheet](#)

- When assembling the pre-taped holder onto the mating surface, the application must be made straight and square, so that the tape bonds consistently with mating surface. Assembly at an angle might cause an imperfect bond to the mating surface.
- Remember to ascertain the compatibility of the different substrates with the tape, as humidity and temperature fluctuations will weaken its adhesive.
- To obtain optimum adhesion, the bonding surfaces must be clean, dry, free from grease and dirt and must be well unified.
- Some typical surface cleaning solvents are isopropyl alcohol or heptane. \*
- *\* If cleaning of PCB or LED surfaces is required, please follow strictly the cleaning instructions recommended by your PCB and/or LED manufacturer - this is important to note, as cleaning in some circumstances can damage LEDs or other electronic components on the PCB. Please also note that optical components should not be cleaned using any chemicals - only a micro fibre cloth should be used to remove fingerprints or other traces from handling.*
- *\* Carefully read and follow the manufacturer's precautions and directions for use when working with solvents. These cleaning recommendations may not be compliant with the rules of certain Air Quality Management Districts in California; consult applicable rules before use.*

Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure and moderate heat, from 100°F (38°C) to 130°F (54°C), will assist the adhesive in developing intimate contact with the bonding surface.

Ideal tape application temperature range is 70°F to 100°F (21°C to 38°C). Initial tape application to surfaces at temperatures below 50°F (10°C) is not recommended because the adhesive becomes too firm to adhere readily. However, once properly applied, low temperature holding is generally satisfactory.

During assembly the optic when placed on the PCB should be firmly held for 1-5 seconds to ensure the best possible bond. The tape will reach its final strength in 72 hours, dependent on the material and ambient conditions.

We request that the customer ensures (and fully tests) the suitability and sufficiency of the bond in his product. For example, mechanical stress, vibration and holes on the surface of the circuit board can weaken the strength of the tape.

### Disclaimer - Taped Holders

Shelf Life - There is 1 year expected shelf life from the date of purchase direct from Carclo.

All Carclo lenses supplied with tape use the same high strength double-coated tape (unless otherwise mentioned in the datasheet). This tape is specifically selected for this application.

These tapes generally work well together with PCBs and LEDs on the market. The customer must take the necessary measures to ensure complete compatibility with their particular application, product, PCB, LED and/or other components.

**Testing and verifying of the adhesives and their combinations is the responsibility of the customer.**

The customer is solely responsible for evaluating the application of double sided tape to Carclo Holders and the adhesion of double sided tape holders to determine whether such double-sided tape is fit for a particular purpose and suitable for the users method of application. The selection of double-sided tape in the adhesion of double sided tape holders is not covered by Carclo's warranty.

Carclo cannot take responsibility for the results obtained by others whose methods we cannot control. It is always the customer's responsibility to determine the adhesive's suitability for their product and to take precautions for protection of property and persons against any hazards that may be involved in the handling and use of adhesives. Carclo disclaims all warranties, including warranties of merchantability or suitability for a particular purpose, arising from use of any adhesive product. Carclo disclaims any liability for consequential or incidental damages of any kind, including lost profits.

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