

These optics are made by Carclo-Optics, the Technical Plastics division of Carclo plc, located in England. More info can be found here.. They are made of a harder plastic, polycarbonate, as opposed to acrylic (I noticed the difference immediately when grinding/cutting away some of the tabs), so they should be stronger, withstand higher temperatures, and a bit more scratch resistant. EDIT 4/23: A quote from Ian of Carclo Technical Plastics, "The material these lenses are made from is polycarbonate but the material isn't in fact harder, it does take higher heat but does scratch more easily. The reason we went for this material is the refractive index, which enables us to get a tighter beam output angle.

There are 6 in total along with 3 different types of holders. 3 models of the optics are nothing I have seen before and are very interesting (marked with *). They are classified into two categories:

<u>Classic Range</u> (Datasheet <u>PDF</u>):

Narrow/6 deg. - p/n. 10003 Medium/15 deg. - p/n. 10003/15 Wide/25 deg. - p/n. 10003/25 Eliptical (Line)/25x6 (*) - p/n. 10003/L25

<u>Specialist Range</u> (Datasheet <u>PDF</u>): Super Narrow/2 deg. (*) - p/n. 10025 Fibre Coupling Optic (*) - p/n. 10034

The pics below will help show why the 25x6, 2deg, & Darp; Fibre caught my attention. The Fibre lens was designed for reflecting light into fiber optic cables/bundles and "backlighting" applications such as screen displays, etc. They also have an optic in development for use with HD/Lambertians that emits a 5 degree wide beam in a full 360 degree area coverage.

There is one circular and two hex type holders which are available in different colors, black, clear, & Data, white. These are also made of polycarbonate material. The circular type holder is identical to the ones found on Star/Os. The two hex holders are designed for use with stars, LuxI & Datasheet for more info and specs. (Holders Datasheet PDF)

Ok, enough jibber jabber, on with the pics!





The 2deg! (ooooh, ahhhh, [img]/ubbthreads/images/graemlins/grinser2.gif[/img])



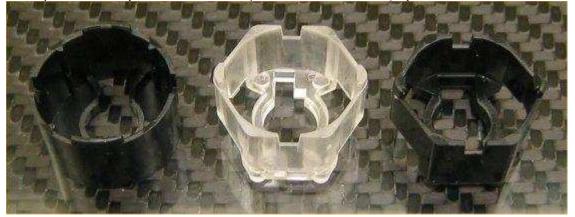




It fits into a MagC/D head perfectly. An additional lens o-ring like the one that comes stock will be needed to fill in the gap (prevent it from moving foward and back). Too bad the head doesn't screw down no where close to bringing the collimator into focus. Nothing a little machining away of the threads or additional threading can't fix. Or a heatsink designed long enough to bring the emitter well into the head would work too.

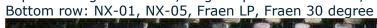






The contenders, from left to right,

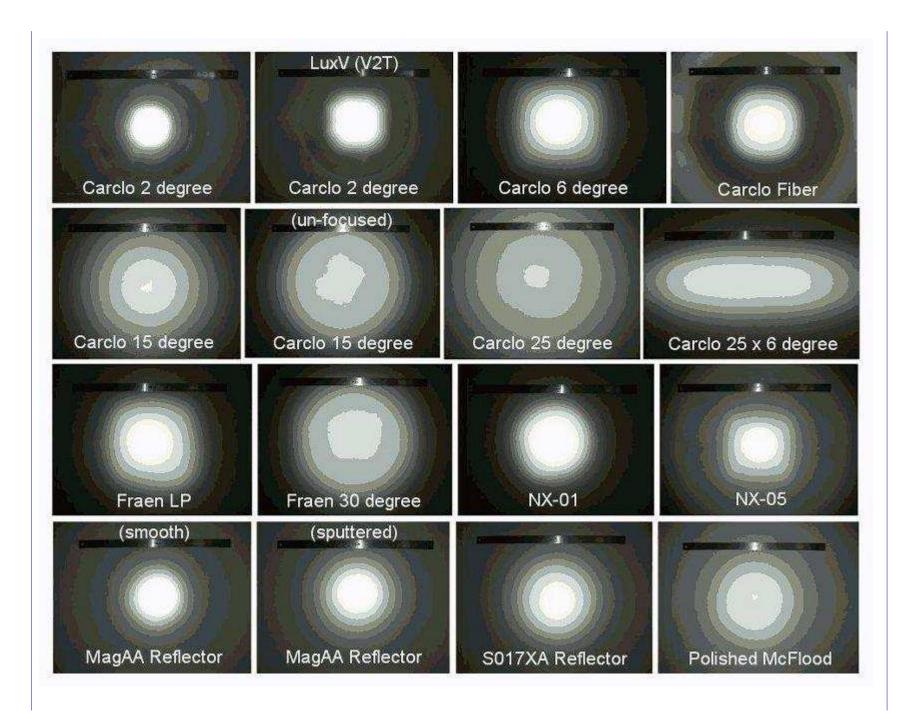
Top row: MagAA reflector, MagAA sputtered reflector, S017XA Reflector, Polished McFlood





Beamshots taken at 3ft. from the wall. The ruler used for scale is 2ft. long. The camera's focus, exposure auto balance, & mp; shutter speed were all locked (I don't know all the features of my camera yet and I didn't know what else I should have locked). I choose only to test with HD/Lambertion since that is what most of us are using these days and limited the review to only optics/reflectors in the same size category. The test luxeon used in all but one beamshot is a Q3J-HD BB500. The LuxV is a V2T BB700.





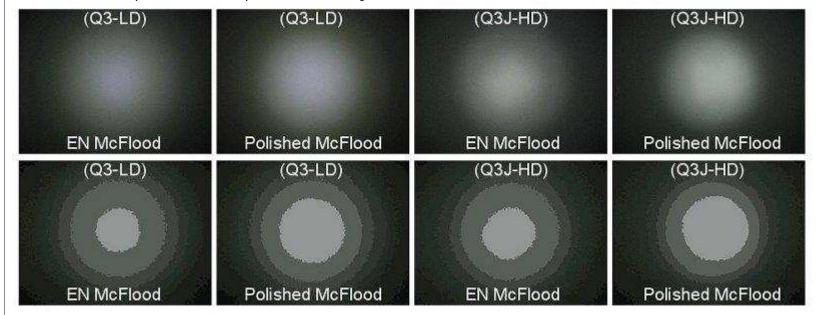
The 6deg optic is identical in dimensions and performance as the optic used in the Longbow Micra. I'm not sure if the Mini uses the same optic but I'm assuming it does. I won't say that LongBow does in fact use Carclo optics in their lights because I don't know that for sure but they are identical.

The 2deg is something I would like to get a hold of and modify a Mag to use. I must return the one I have now back to Zman but at least I got to play with it and get to keep the others. The 25x6 optic caught me by surprise, something I never expected to come out of an optic. The 15deg performed very similar to the Fraen 30deg when de-focused as seen in the pics. I'm not sure if it was supposed to be that way since most of the Carclo optics perform best when spaced out a bit from the emitter. The holders of course provide the correct spacing for most of the optics if not supposed to be all.

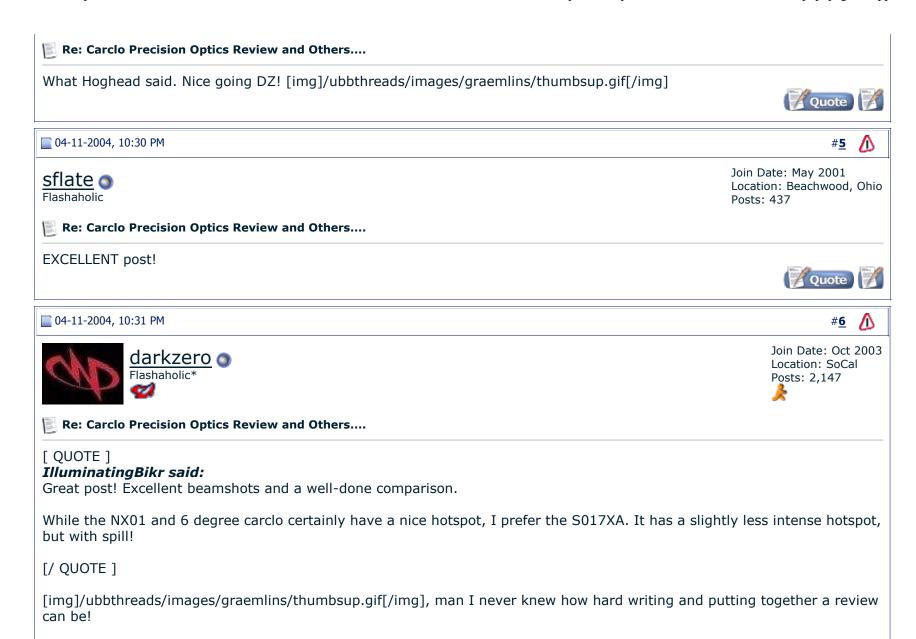
After evaluating all these optics, the NX-01 is still my favorite optic *in it's size class* for use with HD/Lambertians, second would be Carclo's 6deg.

Some McFlood comparisons:

Beamshots taken on the ceiling with me laying on the floor, about 7ft. distance. The widest part of the flood beam is 8ft. (not seen in the pics). The outermost ring just ouside of the "hotspot" with the LD (barely seen in the pics) is just short of 6ft. The "intense" part of the "hotspot" of the HD is just over 4ft.







S017XA reflector. It's kind of like a baby PM6 reflector. The NX-01 and Carclo 6 deg are my preferences when in regards to optics of this size only. They both don't have any spill though. The MagAA reflector is still my favorite reflector in it's size although I heard Brinkmanns perform better but I haven't tried them. Just my opinions though.

Aaron, good point. I forgot about how good spill can be. The MagAA reflector has more spill and a brighter hot spot than the



PM.

BTW, what is "CU"? [img]/ubbthreads/images/graemlins/icon3.gif[/img] [img]/ubbthreads/images/graemlins/thinking.gif[/img] [img]/ubbthreads/images/graemlins/grinser2.gif[/img]

thx



1 04-12-2004, 06:45 AM







Join Date: Feb 2003 Location: Northwest Indiana

Posts: 411

Re: Carclo Precision Optics Review and Others....

Great review darkzero! I wonder if Mr. Bulk or Otokoyama might want to test the 2 degree optic to see if it could be a Bulkhead candidate? Gentlemen are you interested?





■ 04-12-2004, 08:34 PM









Join Date: Jan 2003 Location: Missouri Posts: 5,607

Re: Carclo Precision Optics Review and Others....

The 2 degree, it looks the same size hotspot as other optics. Does it stay smaller at longer distances vs other optics? or is it just simply brighter? Would this be comperable the "alien light beam" optic Jarhead made?

The 25 looks more of a flood than the McFlood!

The eliptical looks neat. Would be good headlights for an RC car!

The 360/5 se optic looks neat too. would make a killer acrlyic back/side light device!





■ 04-12-2004, 11:32 PM

#12





Join Date: Oct 2003 Location: SoCal Posts: 2,147

Re: Carclo Precision Optics Review and Others....

[QUOTE]

IsaacHayes said:

The 2 degree, it looks the same size hotspot as other optics. Does it stay smaller at longer distances vs other optics? or is it just simply brighter? Would this be comperable the "alien light beam" optic Jarhead made?

The 25 looks more of a flood than the McFlood!

The eliptical looks neat. Would be good headlights for an RC car!

The 360/5 se optic looks neat too. would make a killer acrlyic back/side light device!

[/ QUOTE]

Isaac, yes the 2deg does a better job at keeping a really tight focus at greater distances than the others. Of course at greater distances it doesn't stay as small as the in the beamshot pictured. It was the brightest of all the contenders in the review. I wish I still had the 2deg so I could take a beamshot at a further distance. It's on it's way back to Zman already. [img]/ubbthreads/images/graemlins/frown.gif[/img]

Yeah, the 25deg is way more flood than the polished McFlood in the review but the McFlood was used with a HD here and not a LD as it was designed for. I just included the polished McFlood in the review because it's performance with a HD was unexpected and I wanted to share.

Hey that's a good idea for the 25x6! If I still had my gas car it would be on.

I'm curious how the 360/5 will perform too. The first optic for a SE if someone else doesn't come out with one first. Not for any flashlight of course. I wonder if it will work together with a large reflector? [img]/ubbthreads/images/graemlins/thinking.gif[/img]





1 04-13-2004, 09:58 AM

#**13**





Join Date: Jan 2003 Location: Missouri Posts: 5,607

Re: Carclo Precision Optics Review and Others....

DZ: the 360/5 isn't made for the SE. It's for the HD but makes it emit light like a SE. They say the HD with this optic is 4x as bright as a SE alone. They say you can use it for signal beacons or lighting up acrylic displays/etc.





■ 04-13-2004, 10:03 AM







Join Date: Oct 2003 Location: SoCal Posts: 2,147



oops, guess I didn't read it fully. Wonder how I missed that as it clearly states it. [img]/ubbthreads/images/graemlins/icon3.gif[/img] And here I thought it was going to be the first optic for a SE. Thanks for pointing that out, I will edit my post.



Join Date: Jan 2003 Location: Missouri

Posts: 5,607



■ 04-13-2004, 10:10 AM







IsaacHayes
Flashaholic

Re: Carclo Precision Optics Review and Others....

DZ: you list 5 optics, but only show 4 pictures here: 6deg, Fibre, 15deg, 25x6deg I guess the 25x6 is missing? What does it look like? Is it round?

Also, does the polished McFlood hotspot widen up more when aimed into a room? Is it still huge even flood enough? Does it

have the added bonus of being a little brighter but still even flood vs the LD?





1 04-13-2004, 11:06 AM









Join Date: Nov 2002 Location: Germany, Old World

Posts: 10,118



Re: Carclo Precision Optics Review and Others....

great post!

and this huge optic is soooo beautiful!

I'd be in for one just to have it in my hands ... [imq]/ubbthreads/images/graemlins/grin.gif[/imq] bernhard





■ 04-13-2004, 11:46 AM







Join Date: Oct 2003 Location: SoCal Posts: 2,147



Re: Carclo Precision Optics Review and Others....

[QUOTE]

IsaacHayes said:

DZ: you list 5 optics, but only show 4 pictures here:

6deg, Fibre, 15deg, 25x6deg I guess the 25x6 is missing? What does it look like? Is it round?

Also, does the polished McFlood hotspot widen up more when aimed into a room? Is it still huge even flood enough? Does it have the added bonus of being a little brighter but still even flood vs the LD?

[/ QUOTE]

I posted the wrong picture. The 25deg was left out of the old picture. The 25deg looks very similiar to the 15deg and is hard

to tell them apart. I have updated the pics.

The hotspot with the polished McFlood and HD does widen out at farther distances but is still more "intense" than with a LD. The widest part of the flood beam is the same as a LD but the "flood" of the beam is not as even as a LD would be as you can see in the pics. I have updated the post with some McFlood comparisons.











Just received the optics back from darkzero and the little surprise. [img]/ubbthreads/images/graemlins/wink.gif[/img] Thanks again for doing the review and for the little extra. Kudos to darkzero--yet another a stand up good guy to interact with on CPF.









LEDagent Flashaholic*

Join Date: Jul 2001 Location: San Diego, California

Posts: 1,754

Re: Carclo Precision Optics Review and Others....

OH man...GREAT find and great review!!!

Those Carlco 25x6 optics would be GREAT for custom LED bike lights.





1 04-21-2004, 07:43 PM







IsaacHayes 👩 *Flashaholic*

Join Date: Jan 2003 Location: Missouri Posts: 5,607

Re: Carclo Precision Optics Review and Others....

Nice update w/ the mcFloods. It seems polishing does up the output quite a bit. Also broadens the hotspot a bit. Looks like I'll be doing this to mine.





1 04-21-2004, 09:16 PM







Re: Carclo Precision Optics Review and Others....

Join Date: Dec 2002 Location: Costa Mesa, CA

Posts: 4,755

DZ, awsome review!! I need to stop by this fourm more often! Thank you! [img]/ubbthreads/images/graemlins/thumbsup.gif[/img] [img]/ubbthreads/images/graemlins/thumbsup.gif[/img]

Larry



Join Date: Dec 2003

Posts: 1,039

Location: El Cajon, CA













if it was not for the link in the other forum I would have missed this post!

I hope these are available soon! VERY NICE BEAMSHOTS! EXCELENT REVIEW!

Need to find someplace that sells NX-01s!



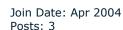
#<u>25</u> /\



■ 04-23-2004, 06:08 AM



Unenlightened





Hi all I am the contact at Carclo Technical Plastic who have designed and manufactured the parts tested here and all I can say is thanks for the results. There are a few points that I would like to point out a few points that are incorrect.

The material these lenses are made from is polycarbonate but the material isn't in fact harder, it does take higher heat but does scratch more easily. The reason we went for this material is the refractive index, which enables us to get a tighter beam output angle.

These are currently only available direct from me and I can send a few parts out as samples if any one is interested please e-mail me on ian.bryant@carclo-optics.com with your needs and a postal address, a UPS account to use for shipping would be nice as a help. Please all keep up the good work and if I can help any one with any further technical data please ask and I will do my best to get the information.





04-23-2004, 08:41 AM





Join Date: Feb 2004

Location: Oregon- United States of America

Posts: 3,723

Re: Carclo Precision Optics Review and Others....

Darkzero!

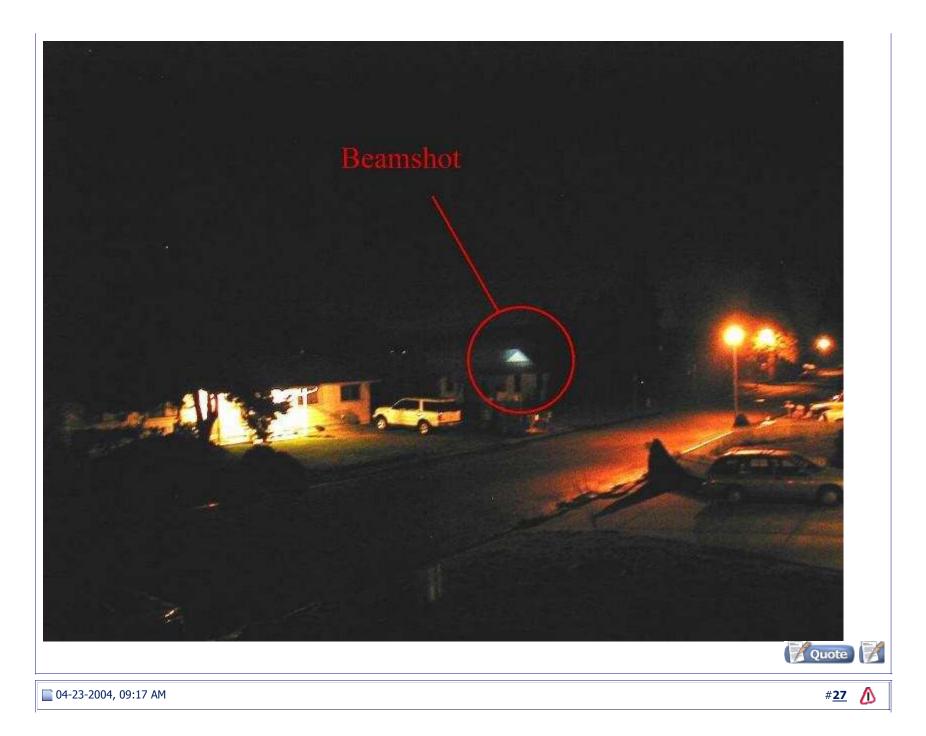
Nice job man!

How about you do a 300ft or 100 yrd or 100 meter beamshots on the narrow ones so we can compare with other long throw optics.

Something like this (TWOK Lux III and Aspherical):

High-Res here: http://www.molalla.net/~leeper/beam3.jpg

21 of 37



Join Date: Oct 2003 Location: SoCal Posts: 2,147



Re: Carclo Precision Optics Review and Others....

[QUOTE]

Optics_Man said:

Hi all I am the contact at Carclo Technical Plastic who have designed and manufactured the parts tested here and all I can say is thanks for the results. There are a few points that I would like to point out a few points that are incorrect.

The material these lenses are made from is polycarbonate but the material isn't in fact harder, it does take higher heat but does scratch more easily. The reason we went for this material is the refractive index, which enables us to get a tighter beam output angle.

These are currently only available direct from me and I can send a few parts out as samples if any one is interested please e-mail me on ian.bryant@carclo-optics.com with your needs and a postal address, a UPS account to use for shipping would be nice as a help. Please all keep up the good work and if I can help any one with any further technical data please ask and I will do my best to get the information.

[/ QUOTE]

Ian, first off, Welcome to CPF! Thank you for taking the time to share your info here. I look up to the manufacturers that take the time to answer questions or comment here. I will update my post.

[img]/ubbthreads/images/graemlins/thumbsup.gif[/img]





1 04-23-2004, 09:25 AM







Join Date: Jun 2002 Location: Chickamauga Georgia

Posts: 2,687



Re: Carclo Precision Optics Review and Others....

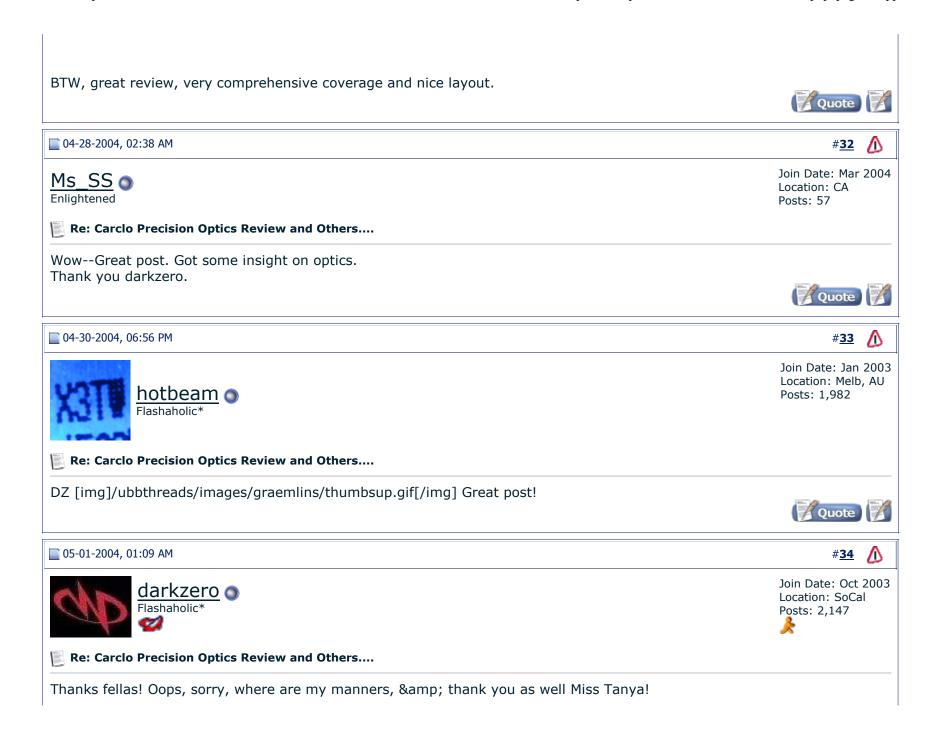
Darkzero: Excellent work and exceptional post! [img]/ubbthreads/images/graemlins/thumbsup.gif[/img]





6/24/2006 3:45 AM 23 of 37





NewBie, sorry, the 2deg is back in Zman's hands. I hope Ian sends me 2deg with the samples for further testing.

dabiscake, actually if you search you might still be able to find some NX-01s on old stock of Star/Os. I just got a couple more recently. I now have 16 of them.

Nerd, actually the 2deg didn't really have sidespill as it looks in the pics. It did give off some funny patterns outside the hotspot but I wouldn't really call it sidespill. Kind of hard to explain. IIRC, yes, the LuxI did put out a bit more of the artifacts than the LuxV. I wish I still had it so I could evaluate it more and tell you for sure. I'd also like to figure out what was causing it. Hope I do get one from Ian. If I find anything more on it I will post here.

Tanya, I'm happy it did and is what I partly intended as well. That is why I included the others along with the Carclos not only for comparison but for useful reference.





#<u>35</u> //

■ 05-01-2004, 06:40 AM



Join Date: Jun 2001

Location: FlashlightReviews.com

Posts: 4,183

Re: Carclo Precision Optics Review and Others....

This is a really good comparison. At the request of the author, I'm going to "Sticky" the post, at least for a while. Also changed the main title slightly for clarification and emphasis.

Nicely done!



#<u>36</u> /\)



■ 05-01-2004, 07:22 AM



Join Date: May 2003

Location: Melbourne, Australia

Posts: 497



DZ, Ditto the great review. This type of review takes a lot of time, all for the help of others as you already knew the results. I, and I'm sure everyone, appreciates this.

Thanks,

Chris





■ 05-11-2004, 11:01 PM



Join Date: May 2004 Location: Seoul Posts: 2,277

#**37**

Re: Carclo Precision Optics Review and Others....

Great reviews.

I am selling Carclo's optic.

Please visit http://www.vehicletech.co.kr or mail to me.

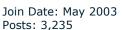




■ 05-12-2004, 02:27 PM







#<u>38</u>



WOW, DZ! How'd I miss this? Great review and photos. [img]/ubbthreads/images/graemlins/clap.gif[/img]

Hi Warren, I visited your site, lots of interesting stuff.

I'm very interested in the Mirror Lens 2 Degree and it appears to be on sale right now. [QUOTE]

Mirror Lens 2 Deg. 52,800 ¿ø

[/ QUOTE]

What does that translate to in USD? Do you accept Paypal cash transfers or Paypal Echecks?

Is there a button I can click that displays the pages in English?

Thanks,

Britt











Join Date: Mar 2004 Location: Texas, USA Posts: 1,223

Re: Carclo Precision Optics Review and Others....

Assuming the prices are in South Korean Won that's 44.6878 USD.

[QUOTE]

BC0311 said:

WOW, DZ! How'd I miss this? Great review and photos. [img]/ubbthreads/images/graemlins/clap.gif[/img]

Hi Warren, I visited your site, lots of interesting stuff.

I'm very interested in the Mirror Lens 2 Degree and it appears to be on sale right now. [QUOTE]

Mirror Lens 2 Deg.



brightness of the centre.







Join Date: May 2004

Location: Seoul Posts: 2,277







Re: Carclo Precision Optics Review and Others....

Hi Britt

Sorry for late reply.

I am not ready for English menu service in my web. It is designed for only in Korea.

You can use my paypal account. warrencho@yahoo.com

In general, my price is depends on the Ex rate and the way you want it to be posted.

Let us start first like;

Carclo's Mirror Lens 2 degree: 40USD Each

EMS charge: 12USD per delivery

Air-mail(non insuranced): Free of charge [img]/ubbthreads/images/graemlins/clap.gif[/img]

Make your day,





■ 05-15-2004, 02:21 PM



Join Date: Jan 2004







Location: berlin.de Posts: 758

Re: Carclo Precision Optics Review and Others....





Join Date: Apr 2004 Location: Ft. Worth TX

Posts: 251



Re: Carclo Precision Optics Review and Others....

Ian -- I had previously e-mailed you and if you have no objections, will try and set up a group buy to help hit the minimum buy.





■ 09-27-2004, 01:56 PM



Join Date: Mar 2004 Location: Central CA

#**48**

Posts: 2,967

Re: Carclo Precision Optics Review and Others....

I know this is an old thread. I thought it was one of the more interesting threads. Has anyone got a chance to really try out the optics? I'd be interested to know how well the optics work.





■ 09-28-2004, 11:14 AM







Join Date: Oct 2003 Location: SoCal Posts: 2,147

Re: Carclo Precision Optics Review and Others....

[QUOTE]

haveblue said:

I know this is an old thread. I thought it was one of the more interesting threads. Has anyone got a chance to really try out the optics? I'd be interested to know how well the optics work.

[/ QUOTE]

It may be old but I think it's still useful. [img]/ubbthreads/images/graemlins/icon3.gif[/img]

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where can one get a NX-01 or a FRAEN LP optic? do they come in different sizes? what would be the price range for each?

thanks,

ioe





■ 01-27-2005, 05:07 PM



Join Date: May 2002

Location: West Coast of Michigan:)

Posts: 1,395

Re: Carclo Precision Optics Review and Others....

Joe,

You can buy the Fraen Low Profile optics either from Dat2zip's Sandwich Shoppe or from PhotonFanatic's ++ Luxeon LEDs--optics--reflectors ++ Sale.

The NX-01 optics have unfortunately been discontinued and are very hard to get now. You might try making a WTB (Wanted To Buy) post in CPF's B/S/T ~ Lights forum.

Good luck, Pat





■ 01-28-2005, 03:38 AM





Flashaholic

Re: Carclo Precision Optics Review and Others....

pat,

Join Date: Jul 2004

Location: manila, philippines

Posts: 148

appreciate the help...indeed it is unfortunate that the NX-01 has been discontinued. do you have any suggestions for something that is close to the NX-01 characteristics? thanks again.

ioe





1 02-02-2005, 08:11 PM





toneloe o Enlightened

Join Date: Nov 2002 Location: houston Posts: 44

Re: Carclo Precision Optics Review and Others....

Hi, I remember reading somewhere awhile back that Fraen LP has a TRI lens version of the LP due out soon, can anyone please direct me to that post or have any updates, thanks.





1 02-03-2005, 04:25 AM





baylisstic
Flashaholic

Join Date: Nov 2004 Location: Long Beach, CA

Posts: 231



Re: Carclo Precision Optics Review and Others....

Does anyone know where I can buy the carclo 50mm 2 deg lens in the US? Thanks





■ 02-03-2005, 05:49 AM



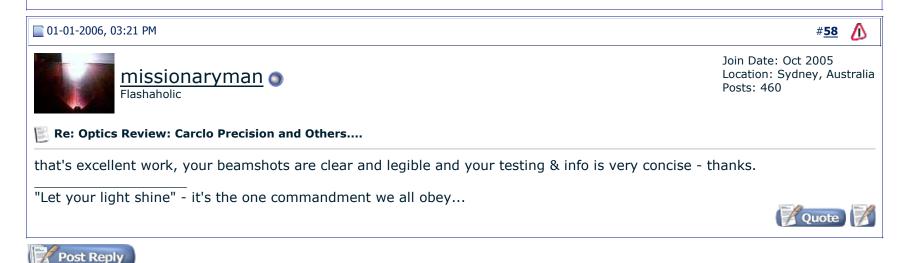




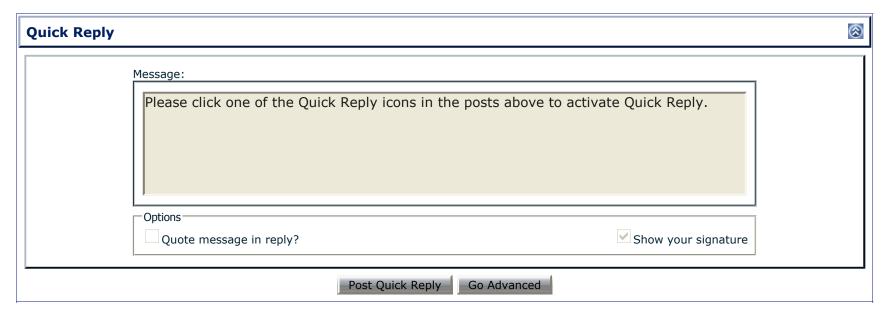
Join Date: Jun 2004 Location: DH, the Netherlands Posts: 488

Re: Carclo Precision Optics Review and Others....

You can ask eTendue to send it to you from Korea, if you can't find it. He'll probably use EMS which is about 5 days shipping tracked. Good luck, and I'm not sure if he has stock left, because he was setting up a deal for a european cpf custom light.



« Previous Thread | Next Thread »







All times are GMT -4. The time now is 03:41 AM.



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