

Re: suggestions for red light

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brucegooglegroups <brucegooglegroups@xxxxxxxxxxxx> wrote in <news:6e07bcdf-2341-441d-99f7-588e7436c2b4@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>:

I have an Orion Dual beam flash light, but it doesn't give off a lot of light for reading maps.
Suggestions for a stronger red light?
Bruce

There are two problems here: How do you read a chart under light polluted skies where you are not fully light adapted? How do you read a chart under those rural mag 6 dark skies that you occasionally drive to? How to you get the right light for both conditions out of one flashlight.

Dealing with the second question – reading a chart under mag 6.0 skies when you are fully light adapted and to re-enforce other comments in the thread – dimmer – not brighter – is the way to go. The dimness of the light is more important than its color.

Having recently lost and replaced my 2004 Rigel Systems I dual light flashlight with the more compact 2007 Rigel Systems II mini-dual (that Orion also sells), I had to go through this again.

<http://www.company7.com/rigel/products/skylitemini.html>

(I recommend the square dual mini shown in the picture, not the round Model I, also shown in the picture. The square model II mini is much better than the old model I. The square model is the same as Orion sells. They buy from Rigel.)

The Rigel Systems II dual mini-flashlight has an alternate red and a white LED. Looking at the red LED through some diffraction film, the newer LED in the Model II mini has very little non-red light in it. I decided that using the Rosculux gels screens to trim any non-red light coming out of the LED was not necessary.

But I decided to add the gel filters over the red LED anyway, as

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described below.

You can get enough Roscolux gel to adapt an RS Model II dual mini from any theatrical supply house. Look in the phone book under "theatrical supplies." Just buy or get them to give you a Roscolux sampler – which can also be had from Amazon.

<http://www.amazon.com/Roscolux-Swatch-Sampler-Almost-Filter/dp/B0002ER2YG>

In prior discussions in this newsgroups on the right cut-off filters to use, the recommended cut-off filters were Roscolux 120 red and 83 blue. The 120 red cut-offs of the red side of the spectrum, the 83 blue cuts off the blue side of the spectrum, leaving a very dim monochromatic red light.

The RS II mini dual's brightness range over the red LED – in particular at its minimum setting – was just too bright for use under a very good mag 6.0 dark sky. I decided to use the Roscolux cut-off gels to make full range the mini-dual more dark vision friendly.

The RS II mini dual easily comes apart. You can cut two simple small rectangles from blue and red Roscolux sampler filters that can be propped loose in an arch over the top of the red LED. The rectangles of red and blue gel will stay in place when you slide the RS II mini dual assembly back into its housing. There is no need to glue or affix them in the housing.

Adding the filters over the red LED yields a good brightness response range for reading charts in very dim light while maintaining dark adapted eyesight under excellent mag 6.0 dark skies.

Turning to the first question – reading a chart under light-polluted skies where you are not dark adapted – I also find the red LED in the RS Model II to be a little too dim.

I left the white LED in the RS II mini dual unobstructed and only use the white light for emergency light and dropped-object ground checks.

But, you can also put just one layer of the red Roscolux gel sheet rectangle over the white light LED and get a passable "brighter" red light for reading charts under light polluted skies.

The Rigel Systems dual mini II also had another minor drawback for which I did a minor after-market alteration. The LED-battery assembly rattles around inside the flashlight housing. It's a minor nuisance but of more of a concern when you drop and kick the flashlight across the ground – like I seem to still do once every other observing session. I decided the probability of the of-the-shelf RS dual mini II surviving a full season wasn't very good.

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I bought a 3 x 2 inch square of dual velcro. A small rectangle of the smooth side of the velcro was put inside the housing. This takes up the free space inside the housing and the battery assembly no longer rattles around inside the housing. When dropped, the whole assembly seems more "solid".

The final end-user modification that I made to the RS II dual-mini was to take a square of the fuzzy part of the sticky velcro patch and put it on the outside of the housing – essentially covering the Rigel label.

The purpose of that modification was so the dual-mini can be quickly attached to either a headband or to an exercise wrist strap and used as either a headlamp or a Star-Trek NG type palm beacon.

Almost all of the time, you just hang the dual mini flashlight around your neck on the provided neck-strap. But there times, when having a "hands-free" light beaming right on your work area is a big help, i.e. when you are adjusting your Meade mount alignment with a wrench, are trying to screw in a dropped screw out of an camera adapter with a mini-screwdriver, or are adding a camera assembly to your scope while holding on to the assembly with both hands.

Hope that helps.

– Canopus56

P.S. – I still have my "bright red flashlight" – an original basic flashlight covered with roscolux gel for use as a brighter light for chart reading. With the RS II dual-mini modifications described above, it pretty much lives in the truck. I don't pull it out anymore.

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