

Re: Kohler illumination question...

Source: <http://sci.tech-archive.net/Archive/sci.techniques.microscopy/2005-04/msg00160.html>

- *From:* "GTO" <gregor_o@xxxxxxxxxxxxxxxx>
 - *Date:* Wed, 27 Apr 2005 02:38:00 GMT
-

Do you use very low-power objectives (2x to 6x)? If yes, keep the frosted glass. Koehler illumination, as implemented by most manufactures, offers rather poor even illumination when very low-power objectives are used. For my Ortholux, I take the frosted glass out for high-power objectives (40x to 100x) and add one for "very low-power" work.

For sake of simplicity, just keep the frosted glass in the light path. Taking it out may cause more problems than create visible improvements.

Gregor

"David Sontag" <acudoc@xxxxxxxxxxxxxxxx> wrote in message news:hslt61pf4uqqqjbh7bk01t8it56eeljr1q@xxxxxxxxxxx
> So let me get this ... I have a Leica DMLS... and yes there is a peice
> of frosted glass ... I never like it ...cuts down on available
> light.... So lets say I take it out ... then what??
>
> Thanks
>
> David
>
>
>
> On Tue, 26 Apr 2005 15:41:34 -0400, Andy Resnick
> <andy.resnick@xxxxxxxxxxxxxxxx> wrote:
>
>>justbeats wrote:
>>> Given that the final step is to hide it behind frosted glass, why is it
>>> necessary to get a focussed image of the lamp filament when setting up
>>> for Kohler illumination?
>>>
>>> I tried to answer this myself by taking images at different powers with
>>> the filament defocussed to varying degrees. I couldn't detect any
>>> difference in final image quality for any of the settings (as long as
>>> the filament remains nicely centered of course).
>>>
>>> After unsuccessfully Googling for the answer, I've another (maybe
>>> related) question. Is critical illumination considered an old and
>>> inferior technique, or a modern and superior one?

Re: Kohler illumination question...

>>

>>Well... the semi-obvious thing to do is remove the frosted glass.

>>Truth is, the manufacturers put it (or a similar diffracting element) in

>>the beam to pacify people who don't know how to properly align a scope.

>> Honestly, or at least that's what my sales rep told me. So I make

>>sure to remove it as a matter of practice.

>>

>>Critical illumination, for all practical purposes, is functionally

>>identical to Kohler illumination. Both maximize throughput, both

>>maximize the "performance" of the illumination system, etc. etc. Some

>>people like critical, most prefer Kohler. Critical illumination

>>generally means one ends up examining a magnified image of the bulb

>>filament. (Guess which I prefer?)

>>

>>Hope this helps....

>

• **References:**

◆ ***Kohler illumination question...***

◇ *From:* justbeats

◆ ***Re: Kohler illumination question...***

◇ *From:* Andy Resnick

◆ ***Re: Kohler illumination question...***

◇ *From:* David Sontag

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