Re: MagLite, Krypton bulbs and NiCd batteries

Source: http://sci.tech−archive.net/Archive/sci.chem/2006−06/msg00422.html

- *From*: Anonymous <BigappleRemailer@xxxxxxxxxxxxxx>
- *Date*: 26 Jun 2006 21:18:50 −0000

> I have a Mini MagLite that takes 2 AA alkaline cells.
> It uses a small krypton bulb. The instructions say
> to avoid rechargeable batteries

[...]

> As far as I know, the NiCds actually have a smaller
> voltage rating than standard alakaline batteries (1.3V
> versus 1.5V).
>
> Why can't you use NiCds with the MagLite krypton bulbs?

As with all filament bulbs, as soon as you under−run them the light fails

–

don't forget you are making aspectrum of light, but only a minor part is in

the visible, the rest is IR. As volts fail so the derrived spectrum moves

to the red and then to IR. Therefore at 3V you get loads of light, at 2.4V
you just get heat.

I need more explanation given this: the bulb is DEAD. It turned black and

when I try it with regular alkaline batteries it does not glow at all. Are
you
saying that at low V there is MORE heat (less light) than at higher V and
that the filament gets vaporized but at higher (proper) V the heat is LESS

and the juice goes into light INSTEAD of heat?

2.4 V: higher heat − more IR − less visible
3.0 V: lower heat − less IR − more visible
I guess I'd like to see the voltage dependence of the spectra of some lamps

someplace.

But other filament light bulbs don't seem to fail that way, at least not cheap−o
40 W − 150 W incandescent bulbs for table lamps or ceiling fixtures.

Why krypton bulbs? SOME other flashlights can run off of alkaline, NiCd
or NiMH batteries w/o such an obvious shortened lifetime.

What about xenon or halogen bulbs?

−=−
This message was sent via two or more anonymous remailing services.

.