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The range of devices from Luxeon, e.g. white emitter Luxeon LXHL-BW01, available from RS components as part number #449-1551, is particularly well suited for a range of imaging applications. Similar devices are available in a range of wavelengths and could be equally well used in the assembly described below.

Heat from the LED is thus removed through the stud and through an M3 countersunk screw to the middle section housing.

A connector, 3-pin mini-DIN type, is fitted to the end housing and leadout wires are soldered to the pcb, before attaching this housing to the LED housing.

The 'output' end is fitted with a male 'C'- mount to allow coupling of different optical elements.

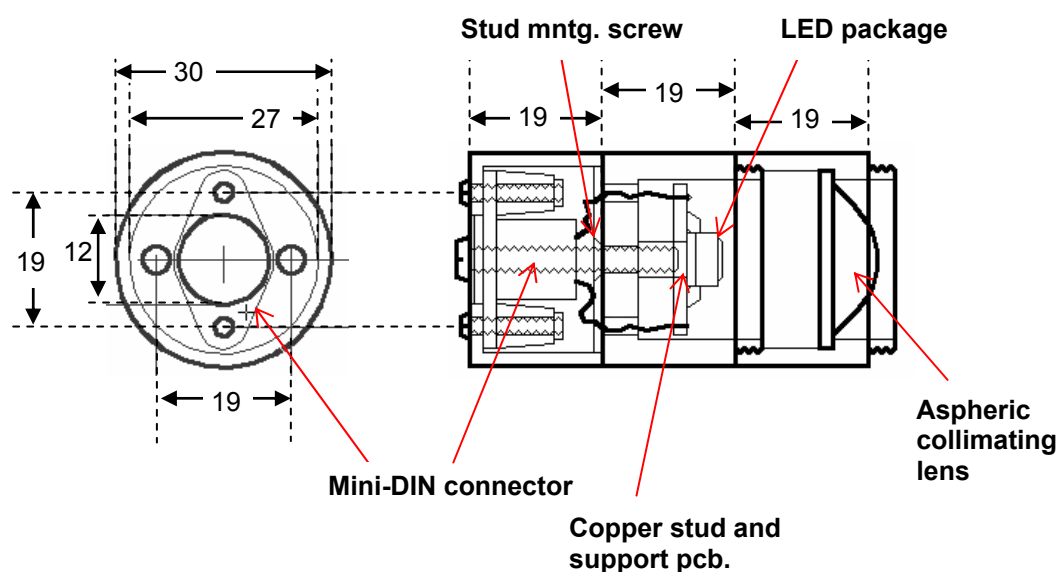


Figure 1: Overall assembly of a collimated high-power LED source.

The most common application is to produce a collimated output. This is achieved by using a small 16 mm focal length aspheric lens (Comar type 16AF25), mounted in a female-male C-mount housing. This is screwed into the LED housing.

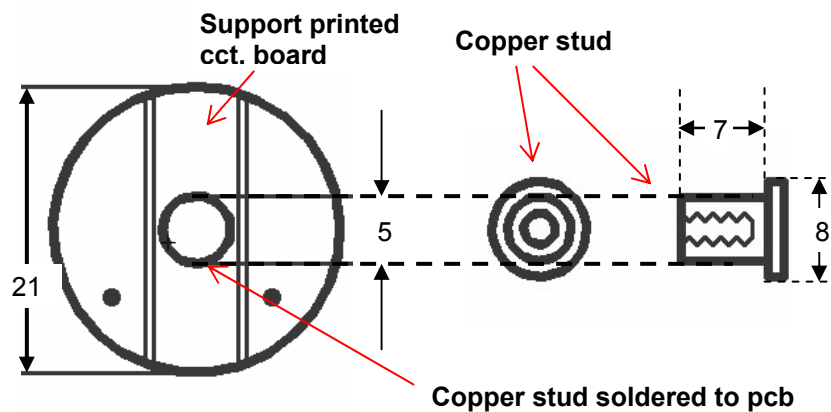


Figure 2: Details of the printed circuit board and the LED copper stud.



Figure 3: The collimated LED source in practice. The left image shows the LED soldered to the printed circuit board, with the aspheric lens holder to the side. The right image shows copper stud mounting screw and connections to the mini-DIN socket

Suppliers:

**Lumileds Lighting, LLC**

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San Jose, California, 95131  
USA Tel (USA): 010408-435-6111.  
Tel (Europe): 0031 499 339 439  
Email: [info@lumileds.com](mailto:info@lumileds.com)

**Comar Instruments**

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Useful link: <http://ledmuseum.home.att.net/museum.htm>