RECOMMENDED GLUES

The glues listed below work generally well to bond an optical component to a given PCB type. LEDIL has tested them and has not found any interference with the optical performance of any current LEDIL product.
The glues listed also generally work well together with LEDs on the market, but each customer must take necessary measures to ensure a complete compatibility with his particular unit and particular LEDs. LEDIL takes no responsibility of glue performance in customers' applications.

MCPCB/FR4 CIRCUIT BOARDS

Loctite 460

Color: Transparent
Component: One component glue
Viscosity: Medium
Thermal resistance: Installation temperature +20°C - +28°C
Application temperature -50°C - +80°C
(momentarily also over +80°C)

Strength: More information about performance with different materials can be found on the datasheet

Curing time: At least 24 hours to obtain full strength, depending on the ambient conditions

Other: Does not absorb into acryl
Mild odour

More information on the datasheet (http://www.ledil.com/2010/datasheets/Loctite460.pdf)

Hysol 9483

Color: Transparent
Component: Two component glue
Viscosity: Low
Thermal resistance: Installation temperature +20°C - +28°C
Application temperature -50°C - +150°C
(momentarily also over +150°C)

Strength: More information about performance with different materials can be found on the datasheet

Curing time: Approximately 72 hours in room temperature (+22°C),
depending on the ambient conditions and the amount of the glue used.

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Other: Does not absorb into acryl

More information on the datasheet (http://www.ledil.com/2010/datasheets/Hysol9483.pdf)

Loctite 5140

Color: Translucent milky white
Component: One component - Silicone
Viscosity: Viscosity, Brookfield - RVT, 25°C, mPa·s (cP):
Spindle 6, speed 2.5 rpm 30,000 to 140,000LMS
Spindle 6, speed 20 rpm 15,000 to 55,000LMS

Thermal resistance: Installation +5°C - 28°C
Application -55°C - 200°C
(momenteraly up to 200°C)

Strenght: Cured for 1 week @ 23 °C / 50±5 % RH
Lap Shear Strength, ISO 4587:
Aluminum to Glass N/mm^2 1.7
Steel to Glass N/mm^2 1.8
Glass to Glass N/mm^2 1.7

Curing Time: 2-5mm / 24h

Other: Mil-A-46146B Proved

More information on the datasheet (http://www.ledil.com/2010/datasheets/loctite_5140.pdf)

3M Scotch Weld™ DP610

Color: Transparent, clear
Component: Two component glue
Viscosity: Base: 30 - 40 mPa.s, Accelerator: 3000 mPa.s

Thermal resistance: Installation -40°C, +23°C, +80°C
Application -55°C - +80°C

More information on the datasheet (http://www.ledil.com/2010/datasheets/scotch_weld_dp610.pdf)

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CERAMIC CIRCUIT BOARDS

TEROSTAT MS 939

Color:	White, off-white, grey & black
Component:	One component Adhesive/Sealant
Viscosity:	High
Thermal resistance:	Installation temperature +5°C - +40°C Application temperature -40°C - +100°C (momentarily also over +120°C)
Strength:	More information about performance with different materials can be found on the datasheet
Curing time:	3mm/24h
Other:	Does not absorb into acryl Odourless Suitable for flexible bonds

More information on the datasheet (http://www.ledil.com/2010/datasheets/terostat_ms939.pdf)

Loctite 5140

Color:	Translucent milky white
Component:	One component - Silicone
Viscosity:	Viscosity, Brookfield - RVT, 25°C, mPa·s (cP): Spindle 6, speed 2.5 rpm 30,000 to 140,000LMS Spindle 6, speed 20 rpm 15,000 to 55,000LMS
Thermal resistance:	Installation +5°C - 28°C Application -55°C - 200°C (momenteraly up to 200°C)
Strenght:	Cured for 1 week @ 23 °C / 50±5 % RH Lap Shear Strength, ISO 4587: Aluminum to Glass N/mm^2 1.7 Steel to Glass N/mm^2 1.8 Glass to Glass N/mm^2 1.7

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Curing Time: 2-5mm / 24h

Other: Mil-A-46146B Proved

More information on the datasheet (http://www.ledil.com/2010/datasheets/loctite_5140.pdf)

GENERAL INSTRUCTIONS OF USE

All surfaces where glue is applied must be clean, dry and free from grease and dirt.
If cleaning of PCB surfaces is needed, please follow strictly the cleaning instructions of your LED manufacturer - this is important as cleaning shall under no circumstances damage LEDs or other electronics components on the PCB.
Further note that optical components shall not be cleaned with any chemicals - only micro fiber cloth may be used to remove fingerprints or other traces from handling.

When using glue, please follow the detailed instructions of the glue manufacturer. E.g. note that different humidity and/or temperature levels may slow down the curing process of a glue bond or shorten its lifetime.

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