



# NORLAND PRODUCTS INCORPORATED

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## NORLAND OPTICAL ADHESIVE 86

Norland Optical Adhesive 86 is an adhesive that will cure optically clear when exposed to long wavelength ultraviolet or visible light (blue-violet). The adhesive has low viscosity and meets the Bellcore specifications of 85C/85RH for 2000 hours as well as being USP Class VI biocompatible. NOA 86 is recommended for bonding glass or plastic. NOA 86 is cured by ultraviolet light between 315 to 400 nanometers and visible light between 400 to 420 nanometers. The peak absorption wavelengths are 325, 365 and 400 nanometers. Minor absorption wavelengths are 410 and 420 nm. Full cure requires 2.5 Joules/cm<sup>2</sup>.

When fully cured, NOA 86 has very good adhesion and solvent resistance, but it has not reached its optimum adhesion to glass. This will come with aging over a period of about 1 week in which a chemical bond will form between the glass and adhesive. This optimum adhesion can also be obtained by aging at 50°C for 12 hours.

NOA 86 can withstand temperatures before aging from -15°C to 90°C when used for glass bonding. After aging, it will withstand temperatures from -125°C to 125°C.

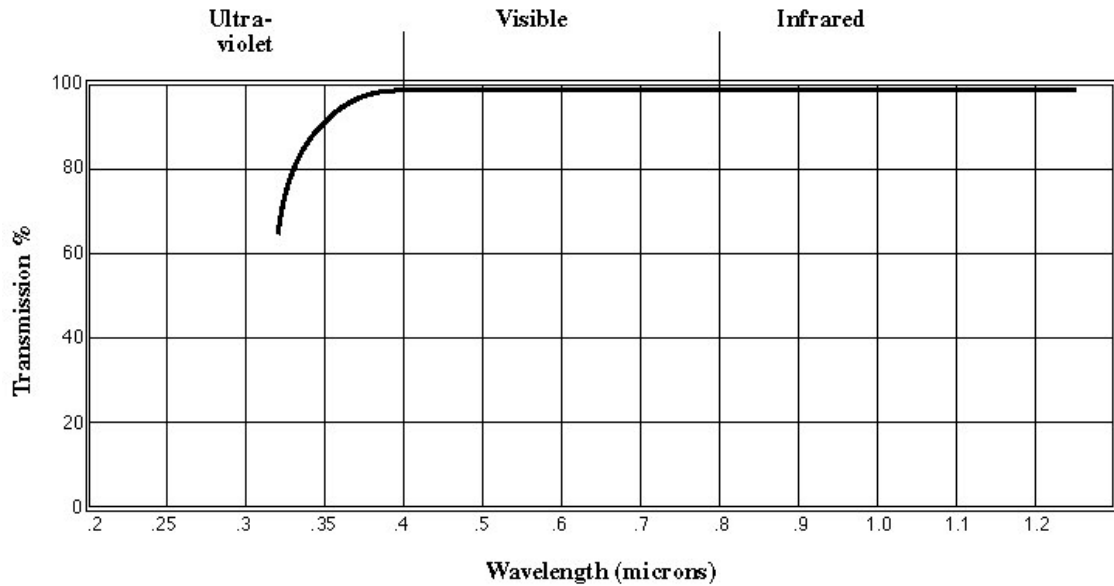
### Typical Properties of NOA 86

Viscosities at 25°C	200-300 cps
Liquid Color	Slight yellow tint that disappears upon curing
Refractive Index cured Polymer	1.55
Modulus (psi)	360,400
Tensile (psi)	7,834
Elongation at Failure	2.8%
Hardness-Shore D	75

Keep NOA 86 refrigerated in a dark place. Allow the adhesive to come to room temperature before using.

Care should be taken in handling this material. The Material Safety Data Sheet should be read for this product. Prolonged contact with skin should be avoided and affected areas should be washed thoroughly with copious amounts of soap and water. If adhesive gets into eyes, flush with water for 15 minutes and seek medical attention.

## Spectral Transmission of NOA 86



The data contained in this technical data sheet is of a general nature and is based on laboratory test conditions. Norland Products does not warrant the data contained in this data sheet. Norland does not assume responsibility for test or performance results obtained by users. It is the user's responsibility to determine the suitability for their product application, purposes and the suitability for use in the user's intended manufacturing apparatus and methods. The user should adopt such precautions and use guidelines as may be reasonably advisable or necessary for the protection of property and persons. Nothing in this technical data sheet shall act as a representation that the product use or application will not infringe a patent owned by someone other than Norland Products or act as a grant of a license under any Norland Products Inc patent. Norland Products recommends that each user test its proposed use and application before putting into production.