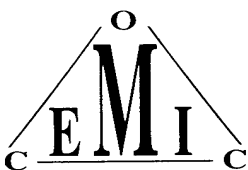
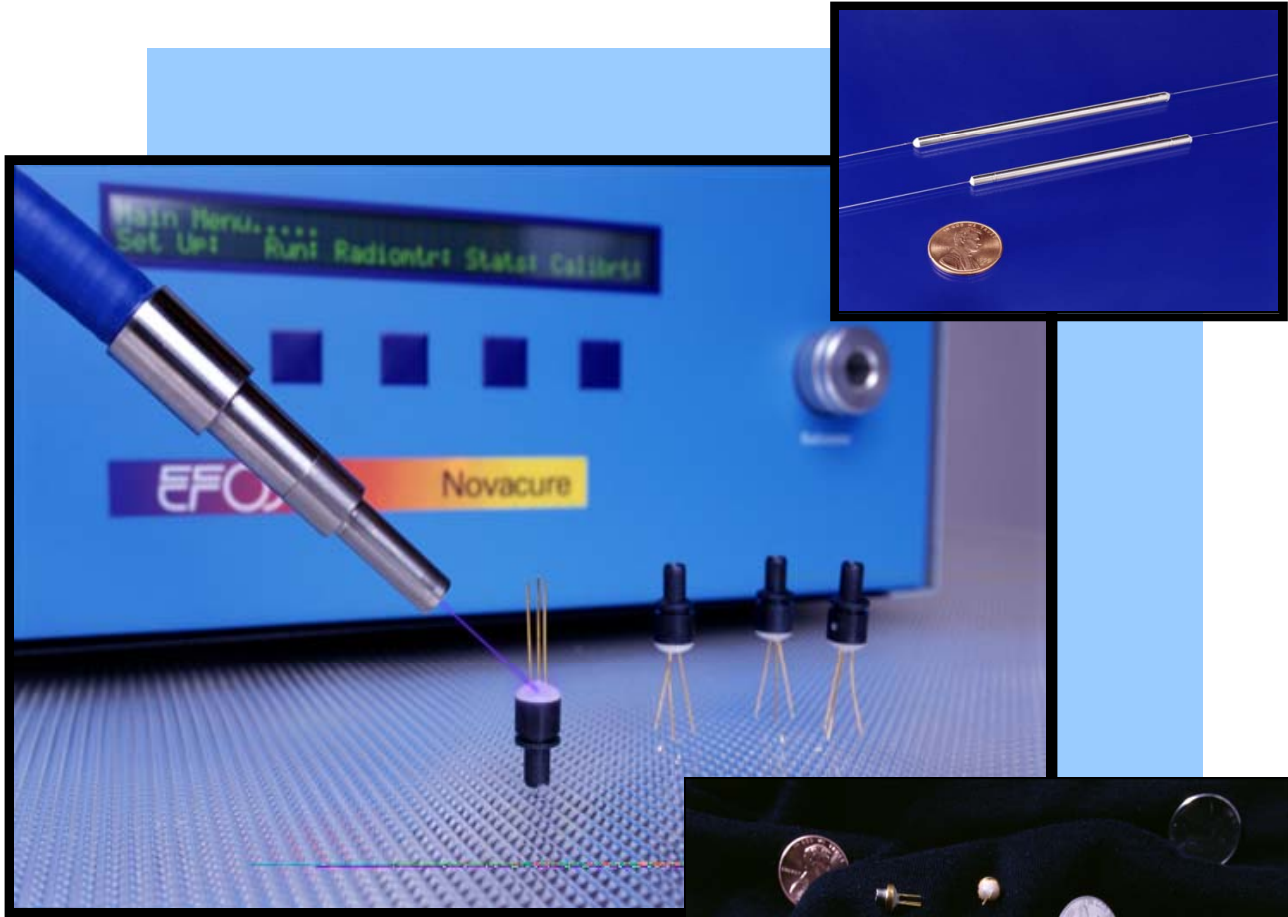


OPTOCAST Adhesives

For Opto-Electronics



Electronic Materials Inc

"An ISO 9001 registered company"

Revision Date: 04/2006

Long Recognized as the World Leader in UV cured epoxies, Electronic Materials, Inc., offers the complete line of OPTOCAST™ Adhesives. All OPTOCAST™ materials are designed for fast, precise bonding of optical and electronic components. Featuring low stress, optical clarity, minimal shrinkage upon cure, very low coefficient of thermal expansion (C.T.E.) values, and excellent moisture resistance, the OPTOCAST™ family represents the "next generation" of adhesive systems for demanding applications in opto-electronics. Including single component UV, UV & thermal cure systems, and two component systems, there is an OPTOCAST™ product for virtually any conceivable opto-electronic application.



Features

Fast cure
No primers required
Little or no odor
Low CTE

Low shrinkage
Low outgassing
Low ionics
Low water absorption

Benefits

Allows for high speed production and automated processes
Minimal chance for errors and faster process
Better manufacturing environment
Maintain stability of alignments throughout temperature cycling
Maintain critical alignments during cure
Prevents contamination inside sealed or hermetic packages
Prevents corrosion or contamination
Good performance in high temperature / high humidity Environments

Product Descriptions

The OPTOCAST™ 3400 series materials are highly filled epoxy systems that can be cured with UV or thermal energy. They are ideal for bonding and fixturing. All feature low CTE and minimal shrinkage upon cure.

OPTOCAST™ 3400

Very low shrinkage upon cure and very low C.T.E. For fixturing and maintaining critical alignments, low stress and high Tg.

OPTOCAST™ 3408

Very low CTE and high Tg contains maximum particle size of 12 microns

OPTOCAST™ 3410

Very low shrinkage on cure, high Tg. Contains maximum particle size of 24 microns.

OPTOCAST™ 3411

Low C.T.E. and a very flowable viscosity.

OPTOCAST™ 3415

Lowest C.T.E. and shrinkage available.

OPTOCAST™ 3421

Low CTE, viscosity and shrinkage upon cure. Somewhat flexible for good adhesion to some substrates.

The OPTOCAST™ 3500 series materials are single component UV cure epoxy systems with excellent optical properties. Most are available with an additional thermal cure mechanism designated as - HM.

OPTOCAST™ 3505

The original UV cure epoxy for opto-electronic uses. Very low viscosity and high Tg.

OPTOCAST™ 3506

A lower Tg and higher viscosity version of 3505. Use where a lower modulus is needed.

OPTOCAST™ 3507

A higher viscosity version of 3505 where less flow is needed.

OPTOCAST™ 3514

A very soft but durable epoxy for sealing & encapsulating.

OPTOCAST™ 3553

The newest member of the 3500 family, exhibiting excellent moisture resistance and bond strength.

OPTOCAST™ 3553-UTF

A variation of 3553 designed to cure in sections less than 20 microns

The OPTOCAST™ 3600 series materials are thermal cure epoxy systems designed for applications which can not utilize a UV cure procedure. All two component systems are available pre-mixed and frozen

OPTOCAST 3601

A clear, two component optically low viscosity and durable epoxy that is hard but not brittle.

OPTOCAST 3602

A lower viscosity, and slightly softer version of OPTOCAST 3601.

OPTOCAST 3660

A color-coded two-component epoxy system with excellent sheer strength and adhesion.

OPTOCAST 3663

A single component thermal cure epoxy with several viscosity versions available.

OPTOCAST 3670

A black, low CTE thermal cure epoxy with excellent adhesion and moisture resistance.

The OPTOCAST™ 3700 series materials are single component UV and/or thermal cure acrylic pre-polymers. They cure extremely quickly and adhere well to various substrates.

OPTOCAST AC-3723 Series

A family of liquid pre-polymers for sealing, coating, bonding, or encapsulating. Members differ in viscosity – from free flowing liquid to high viscosity gel.

OPTOCAST AC-3724 Series

A family of liquid pre-polymers which have higher flexibility, lower hardness, lower Tg and higher elongation than that of the AC-3723 Series

OPTOCAST AC-3741

A medium viscosity material with low CTE & excellent thermal cycle performance

OPTOCAST AC-3761

Low viscosity, High Tg for coating or encapsulating

OPTOCAST AC-3762

An acrylated epoxy with good adhesion to polycarbonate CAB, PMMA, ceramic and metal. Cures with both UV and visible light energy

Typical Properties

OPTOCAST	Color	Viscosity - cps.	Storage Conditions	Hardnes s REX D	C.T.E.	Refractive Index ¹	Elongation	Tg - C°	Max. filler size	Cure Method
3400	Gray	175,000	-20°C	90+	18	N/A	2%	>150	100	UV/Thermal
3408	Gray	40,000	-20°C	90+	16	N/A	2%	>150	12	UV/Thermal
3410	Gray	95,000	-20°C	90+	14	N/A	2%	>150	24	UV/Thermal
3411	Gray	17,000	-20°C	90	19	N/A	3%	>150	100	UV/Thermal
3415	Gray	100,000	-20°C	90	12	N/A	2%	>150	80	UV/Thermal
3421	Gray	20,000	-20°C	88	19	N/A	8%	115	100	UV/Thermal
3505	Clear	350	RT	88	65	1.517	3%	145	N/A	UV
3506	Clear	850	RT	81	65	1.52	12%	120	N/A	UV
3507	Clear	1,000	RT	88	65	1.52	3%	145	N/A	UV
3514	Clear	55,000	RT	A-80	65	1.495	100%	-10	N/A	UV
3553	Clear	1,000	RT	88	60	1.512	4%	145	N/A	UV
3553-UTF	Clear	800	RT	88	60	1.513	4%	145	N/A	UV
3601	Clear	Mixed 1,800	RT(unmixed)	90	55	1.53	2%	130	N/A	Thermal
3602	Clear	Mixed 1,000	RT(unmixed)	84	65	1.54	15%	65	N/A	Thermal
3660	Yel./Blue	Mixed 9,000	RT(unmixed)	84	60	N/A	3%	110	N/A	Thermal/RT
3663	Amber	20,000	0°C	85	55	1.54	15%	100	N/A	Thermal
3670	Black	35,000	-20°C	92	25	N/A	1%	150	100	Thermal
AC-3723 series	Clear	2,000- 250,000	Shelf	75	80	1.48	25%	40	N/A	UV/Thermal
AC-3724 series	Clear	2,000- 250,000	Shelf	57	75	1.49	75%	36	N/A	UV/Thermal
AC-3741	White	110,000	-20°C	78	18	N/A	20%	100	24	UV/Thermal
AC-3761	Clear	450	Shelf	85	60	1.52	10%	90	N/A	UV/Thermal
AC-3762	Clear	5,000	Shelf	63	72	1.51	45%	55	N/A	UV/Thermal

¹ @589nm

* For detailed technical information on moisture resistance properties of OPTOCAST materials please refer to EMI Technical Service Report TSR #15.

All data in this bulletin is based on our own research and the research of others. They are believed to be accurate, however no guarantee of accuracy is made. Product description is sold without warranty except conformity to specification and on condition that the purchasers shall determine suitability for their particular purpose.



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