

*“Fiber-Optic
Industry Standard”
EPO-TEK® 353ND...
...Now Available with
Enhanced Levels of
Performance*

Hybrid Chemistry Adhesives For Optoelectronics



UV Hybrid Adhesive Benefits

- Overall process improvement
- Lower stress and less shrinkage
- Easier handling
- Tack free in 10-20 seconds
- 85°C/85%RH resistance, comparable to 353ND

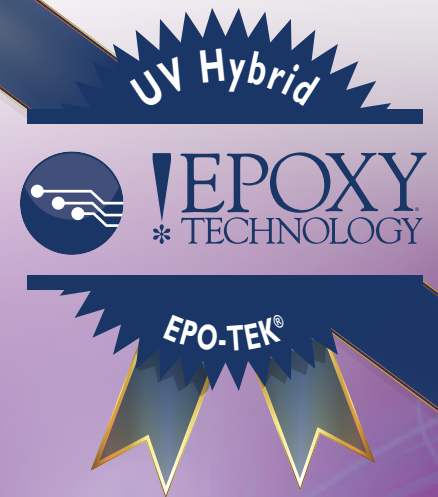
For specific application advice, contact
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**High Performance Line
of
UV Hybrid Adhesives**



EPO-TEK® Epoxy/UV Hybrid Adhesives



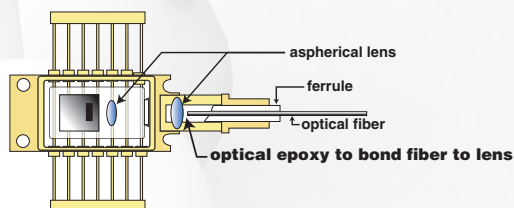
Traditional Epoxy

353ND Modified Epoxy/UV Hybrid Products

| | 353ND | HYB-353ND | HYB-353ND-LV | HYB-353ND-HV | HYB-353ND-TX2 | HYB-353ND-TX3 |
|---|---|--|--|--|--|--|
| | Industry GOLD Standard | Viscosity match of 353ND | Low viscosity, fast tack | Higher viscosity, fast tack | Thixo version TI = 1.6 | Thixo version TI = 1.3 |
| Viscosity (@10 rpm) | 3,000-5,000 cPs | 3,000-5,000 cPs | 800-1,300 cPs | 9,000-12,000 cPs | 20,000-30,000 cPs | 25,000-40,000 cPs |
| Viscosity is typical until a value range is established | | | | | | |
| Pot Life | <3 hrs | 2 hrs | 20 hrs | 2 hrs | 2 days | 2 days |
| Tg (°C) | ≥90 | 109 | 83 | 116 | 105 | 89 |
| Cure Condition | 150°C/1 hr | UV 20 sec @ 100mW/cm ² +150°C/30min | UV 10 sec @ 100mW/cm ² +150°C/30min | UV 10 sec @ 100mW/cm ² +150°C/30min | UV 10 sec @ 100mW/cm ² +150°C/30min | UV 10 sec @ 100mW/cm ² +150°C/30min |
| Lower temperature cures (≥80°C) are possible depending upon application | | | | | | |
| Degradation Temp (°C) | 412 | 400 | 400 | 388 | 410 | 399 |
| Weight Loss | 0.22% | 0.06% | 0.08% | non detectable | 0.05% | 0.19% |
| Die Shear (kg) | 30.6 | 24 | 19 | 28 | 17 | 18 |
| Spectral Transmission | ≥95% @ 1100-1600nm ≥98% @ 800-1000nm | ≥95% @ 1100-1600nm ≥98% @ 800-1000nm | ≥95% @ 1100-1600nm ≥98% @ 800-1000nm | ≥95% @ 1100-1600nm ≥98% @ 800-1000nm | ≥95% @ 1100-1600nm ≥98% @ 800-1000nm | ≥95% @ 1100-1600nm ≥98% @ 800-1000nm |
| *Index of Refraction | 1.5694 | 1.5547 | 1.5221 | 1.5556 | †N/M | †N/M |

* uncured at 589nm
† not measured

Typical UV Hybrid Application Butterfly Type LD Module



Process Improvement

Align → **Hold/Tack (with UV)** → **Final Processing (with Heat)**

- Higher throughput
- Easier handling
- Tack Free in 10-20 seconds
- 85°C/85%RH resistance, comparable to 353ND

Available in premixed frozen syringes

