

Characteristics Comparison of Typical Transparent Material

| | Unit | CNC Machining | | | SLA | Vacuum Casting |
|--|------|---|---|---|---|---|
| | | Polycarbonate | Acrylic | Rigid PVC | TSR-829 | Hei-Cast 3744 |
| Density | | 1.2 | 1.19 | 1.45 | 1.07 | 1.13 |
| Tensile strength | MPa | 61 | 76 | 34-62 | 44 | 60 |
| Elastic modulus (bending) | GPa | 2.23 | 3.2 | 2.4-4.1 | 1.84 | 2.0 |
| Charpy impact strength (notched) | J/m | 880 | 17 | 19 | 34 | 10 |
| Continuous use temperature | °F | 239 | 140-188 | 140 | --- | --- |
| Heat distortion temperature (1.82MPa) | °F | 271 | 212 | 129-174 | 120 | 176 |
| Characteristics | | Excellent in transparency, heat-resistance, cold-resistance and mechanical strength | Excellent in transparency, weatherability and glossy | Excellent in chemical-resistance | Excellent in transparency, moisture-resistance and water-resistance | Excellent in transparency, chemical-resistance and oil-resistance |
| Main use cases | | Visualization of interior models, mechanical parts, decorative parts of arcade machine and lenses | Visualization of interior models, optical lenses and display models that require high appearance design | Transparent parts of experimental equipment | Visualization of interior models and complex structural parts that cannot be machined | Suitable for reproducing about 10 pcs |

Note : *The numbers in this table are typical measurement values and not guaranteed

*The figures may change depending on the actual condition, it is recommended to perform a pre-evaluation under a condition equal to an actual use condition