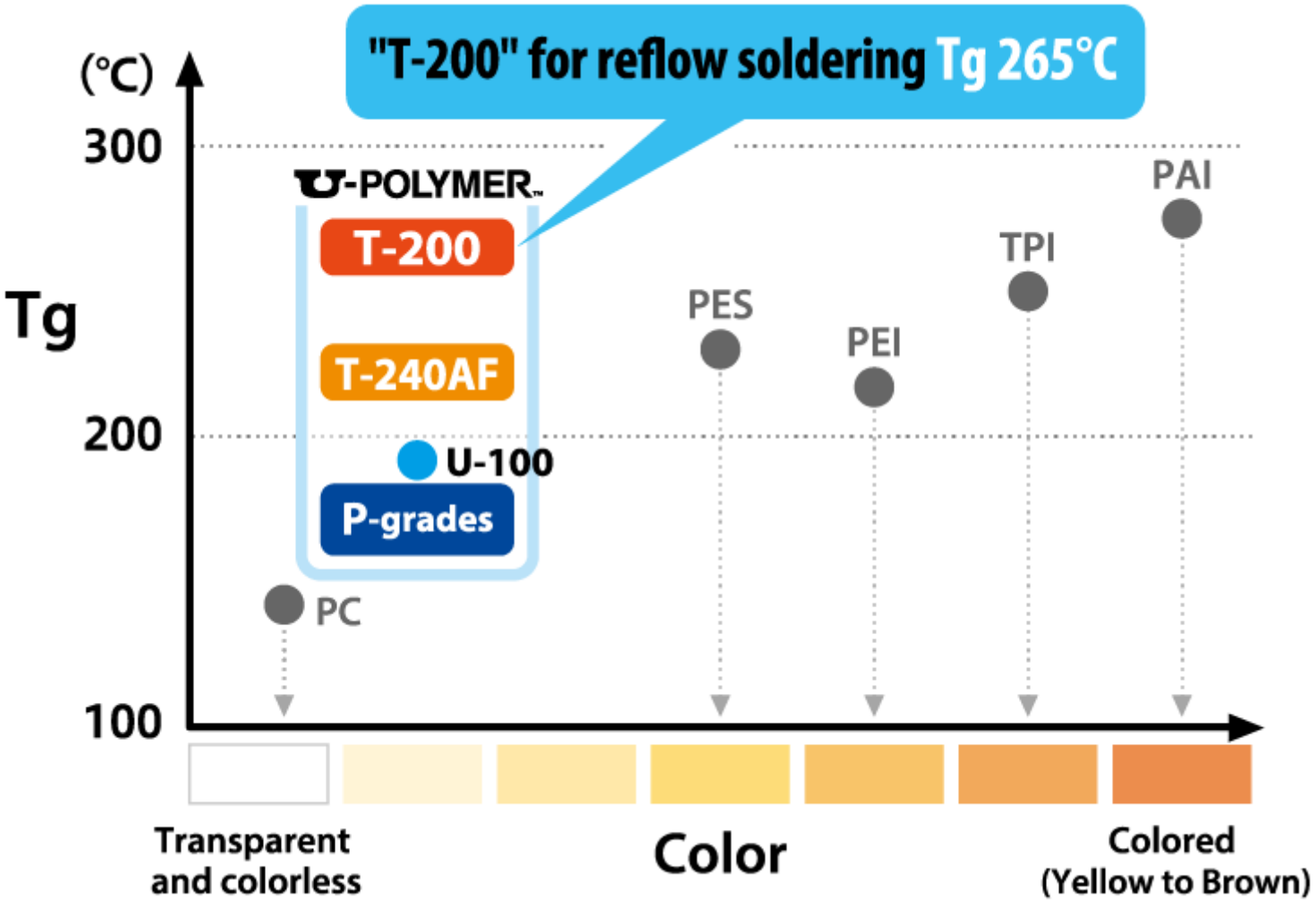
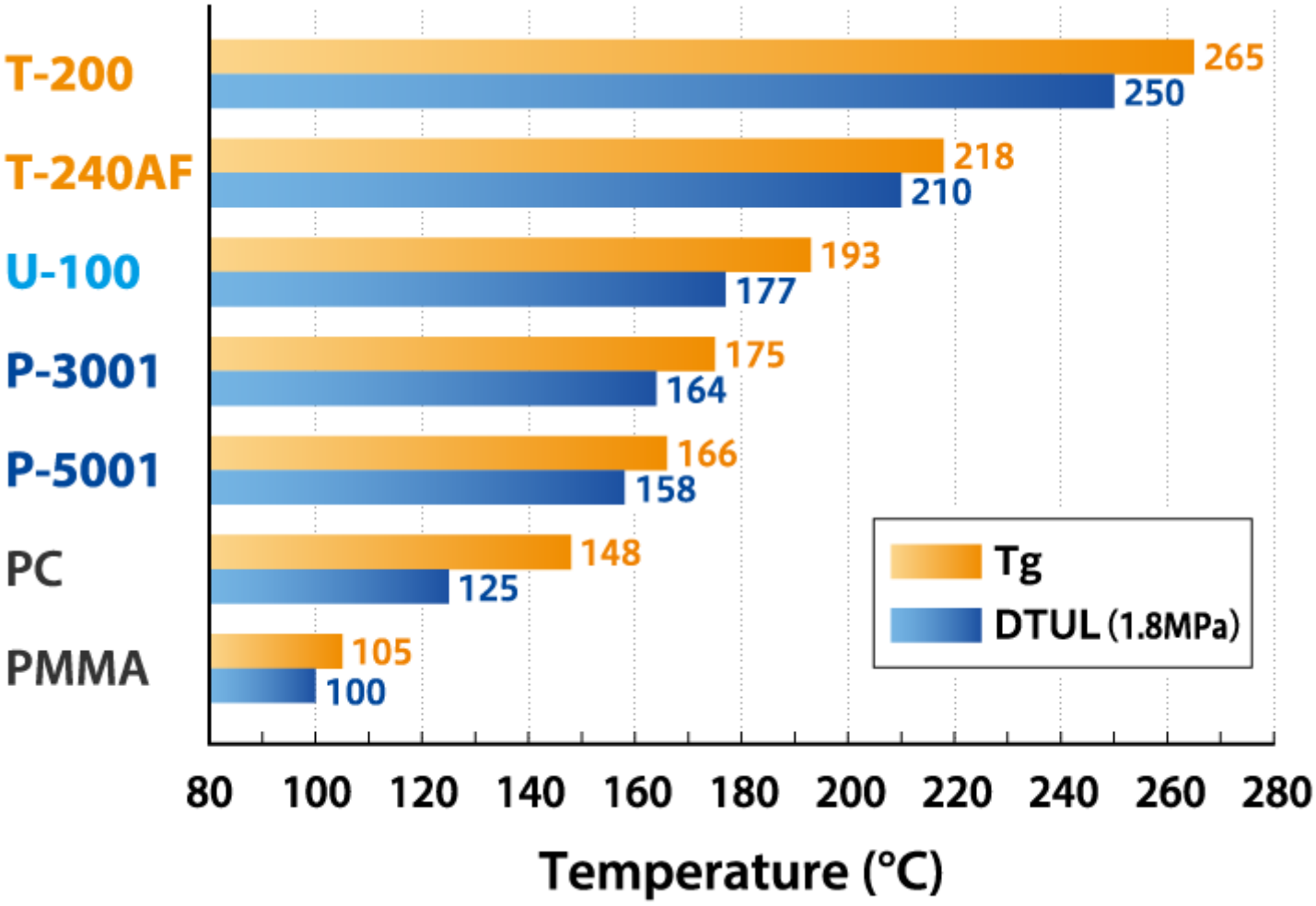
U polymer

T series resins (transparent high heat resistant grade)

Technical Data

Heat resisitance of each transparent resins





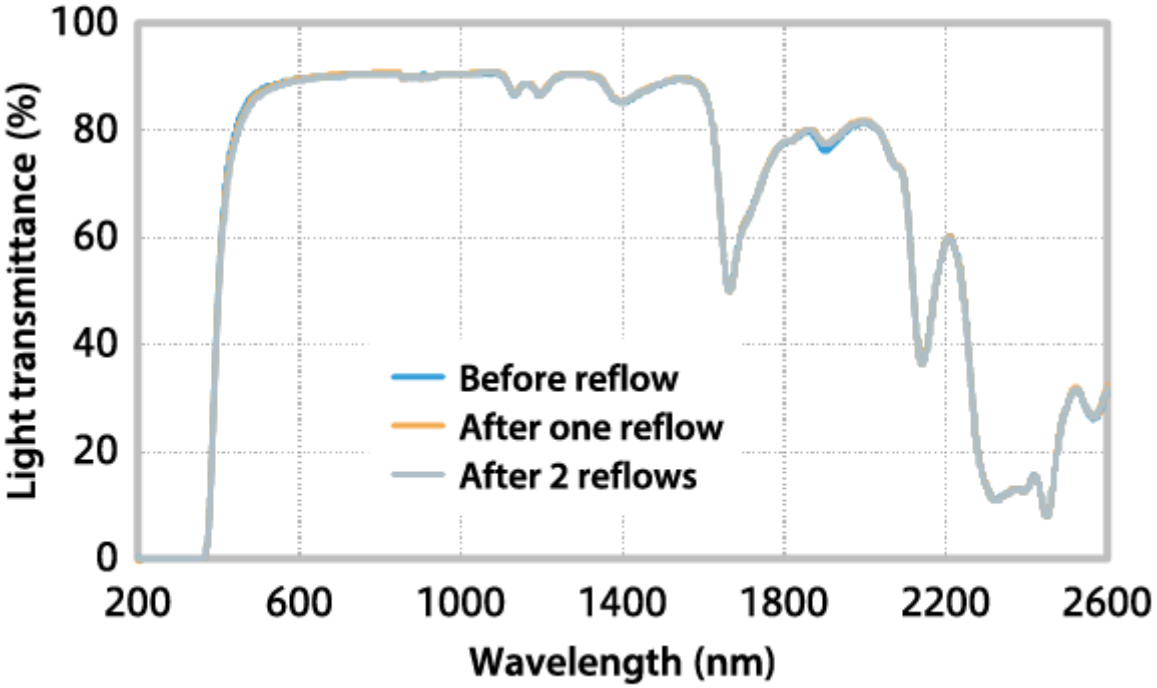
T series is an amorphous matrial with high heat resistance which exceeds resins such as PEI or PES.

Depending on the conditions, there is a grade that can deal with reflow soldering as well.

Reflow resistance

Changes in optical properties

No significant change in transmittance in all wavelength ranges before and after reflow.



Changes in dimensional characteristics and appearance

No significant dimensional change before and after reflow

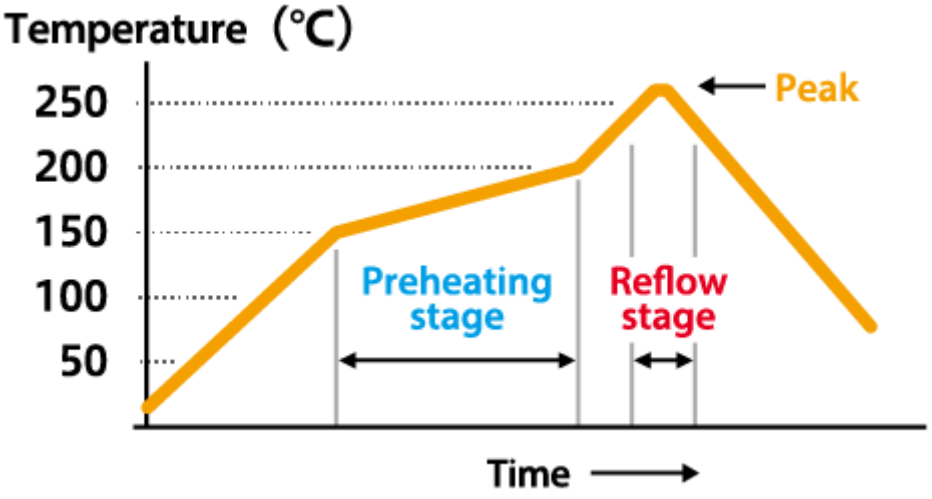
		Before reflow	After one reflow	After 2 reflows
Dimensional change	MD	— (Zero before reflow)	0.2% Shrinking	0.2% Shrinking
	TD	— (Zero before reflow)	0.2% Shrinking	0.2% Shrinking
Warp				
		—	No change	No change
Appearance				
		—	No change	No change

Sample : T-200 C-N

Specimen shape
: 20mm square × 1mmt

Reflow profile

Compliant with JEDEC J-STD-020 standard
Details of the surface temperature and
time of the test piece are as follows
Preheating (150～200℃) : 100 seconds
Reflow condition: MAX 260℃,
over 255℃ 30seconds,
over 217℃ (Liquidous temperature) 100seconds
Reflow 2 cycles



Comparision with "T-200" and other major resins

	T-200		
Heat resistance	Reflow possible	Reflow possible	Reflow possible
Refractive index	1.58	1.51	1.51~1.57
Abbe number	26	Unknown	35~58
Water absorption	0.4%	1%	0.5%
Injection molding	Possible	Possible	Impossible
Post-processing after molding	Unnecessary	Electron beam cross-linking	UV / Thermal curing

T series has high transmittance in the near-infrared wavelength region used for optical communications and infrared sensors, and can control the molding process cost, so it can be expected to be applied to various optical devices that require reflow soldering.