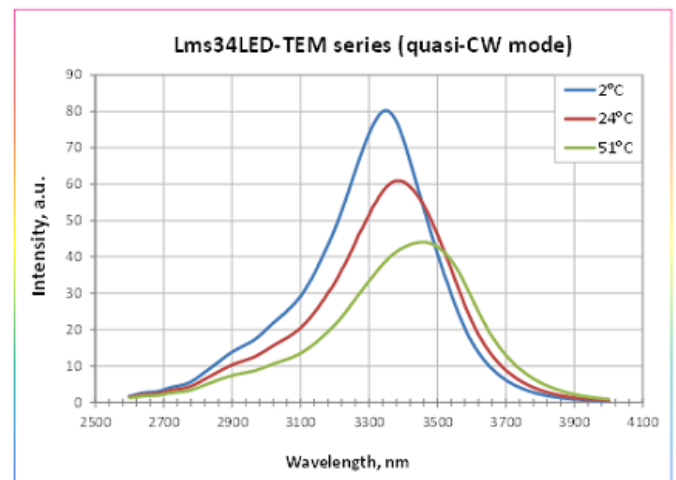
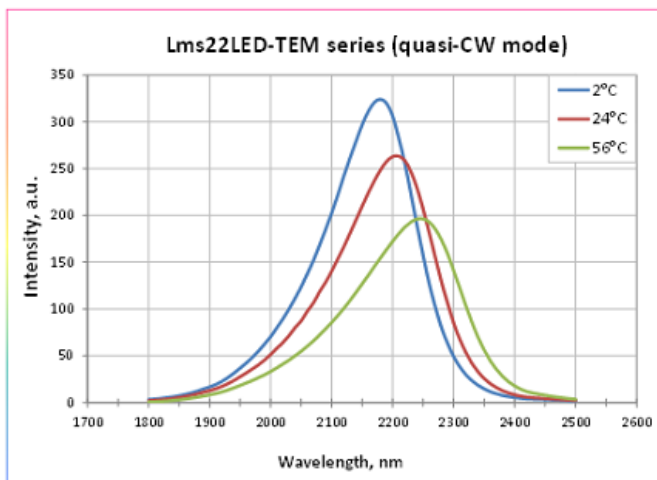




## Temperature Dependences

It is typical for all semiconductor radiation sources to have intensity decreasing with increasing temperature. This decrease of the emission intensity is due to several temperature-dependent factors including non-radiative recombination via deep levels, surface recombination, and carrier loss over heterostructure barriers. In addition to this peak wavelength shifts to longer wavelength when the temperature increases.

Housing LED chip into a package with a thermoelectric module (Peltier element) enables to obtain fixed temperature of a LED chip in a wide range and thereby to provide wavelength tuning and stable operating at the desired wavelength.



Our LEDs can operate in wide temperature range, so that certainly broadens their field of application. As an example LED4.15 spectra at 1-120°C temperature range are presented here.

