# chap2

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## Contents



| Radiant | Symbol | Units | Definition |
|---|---|---|---|
| Energy | $Q_{rad}$ | Joules(J) | |
| Flux | $\Phi_{rad}$ | Watts(W = J $s^{-1}$) | |
| Flux density | $M_{rad}$ | W $m^{-2}$ | |
| Exitance | M | W $m^{-2}$ | |
| Irradiance | E | W $m^{-2}$ | |
| Intensity | I | W $sr^{-1}$ | |
| Radiance | L | W $sr^{-1}$ $m^{-1}$ | |

Spectral Radiance

| Radiance | Symbol | Units | Definition | Landsat 8 |
|---|---|---|---|---|
| Spectral | $L_\lambda$ | W $sr^{-1}$ $m^{-1}$ $\mu m^{-1}$ | | |
| At Sensor | $L_{sensor}$ | W $sr^{-1}$ $m^{-1}$ $\mu m^{-1}$ | | |
| At Surface | $L_{sensor}$ | W $sr^{-1}$ $m^{-1}$ $\mu m^{-1}$ | | |

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## 1 Wein's Displacement Law

$\lambda_m$ = A $T_($$\mu$m) (1)

## 2 The Krichoff Radiation Law