$$
\begin{aligned}
f_\lambda(\lambda) &= \text{ergs/cm}^2\text{/s/Angstrom} \\
N &= \int \frac{f_\lambda(\lambda)\, T(\lambda)}{hc/\lambda} d\lambda \qquad \text{photons/cm}^2\text{/s} \\
N(z) &= \int \frac{f_\lambda(\frac{\lambda}{1+z})\, T(\lambda)}{hc/\lambda} d\lambda \qquad \text{photons/cm}^2\text{/s}
\end{aligned}
$$