summable function

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A measurable function $f : \Omega \to \mathbb{R}$ where $(\Omega, \mathcal{A}, \mu)$ is a measure space is said to be **summable** if the Lebesgue integral of the absolute value of f exists and is finite,

$$\int_\Omega |f| d\mu < +\infty$$

An alternative way of expressing this condition is to assert that $f \in L^1(\Omega)$.

Note that some authors distinguish between integrable and summable: an integrable function is one for which the above integral exists; a summable function is one for which the integral exists and is finite.