PHYSICAL CONSTANTS

c_0	speed of light in vacuo	299 792 458	$[m \cdot s^{-1}]$
ε_0	vacuum permittivity	$8.854\,187 \cdot 10^{-12}$	$[A \cdot s \cdot V^{-1} \cdot m^{-1}]$
h	Planck constant	$6.626\,069 \cdot 10^{-34}$	$[J \cdot s]$
k_B	Boltzmann constant	$1.380\,649 \cdot 10^{-23}$	$[J \cdot K^{-1}]$
m_0	electron rest mass	$9.108 \cdot 10^{-31}$	[kg]
μ_0	vacuum permeability	$4\pi \cdot 10^{-7}$	$[V \cdot s \cdot A^{-1} \cdot m^{-1}]$
q	elementary charge	$1.602 \cdot 10^{-19}$	[C]
Z_0	impedance of free space	367.7	[Ω]

SELECTED PROPERTIES OF SILICON (AT 300 K)

E_G	energy band gap	1.12	[eV]
ε_r	relative permittivity	11.7	[-]
μ_e	electron mobility	$1350 \cdot 10^{-4}$	$[m^2 \cdot V^{-1} \cdot s^{-1}]$
μ_h	hole mobility	$480 \cdot 10^{-4}$	$[m^2 \cdot V^{-1} \cdot s^{-1}]$
N_C	effective density of states in the conduction band	$3.0 \cdot 10^{25}$	$[m^{-3}]$
N_V	effective density of states in the valence band	$1.0 \cdot 10^{25}$	$[m^{-3}]$
n_i	intrinsic concentration of carriers	$1.5 \cdot 10^{16}$	$[m^{-3}]$
n	refractive index	3.5 (at λ=1100nm)	[-]