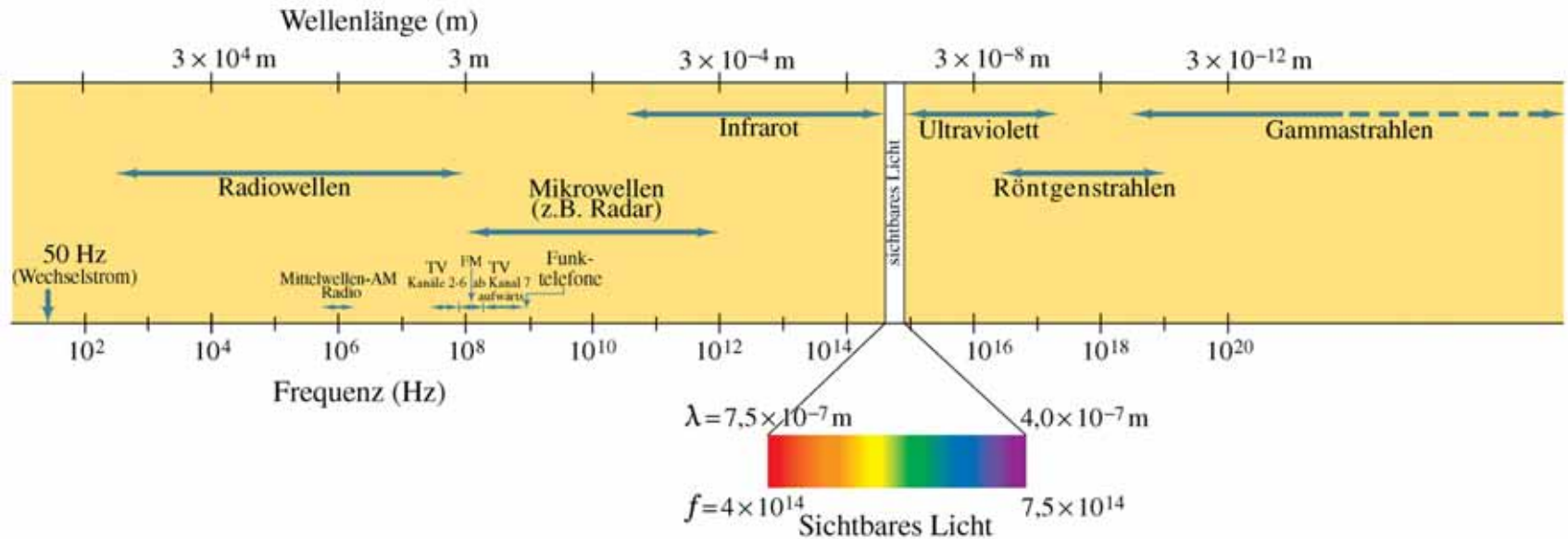
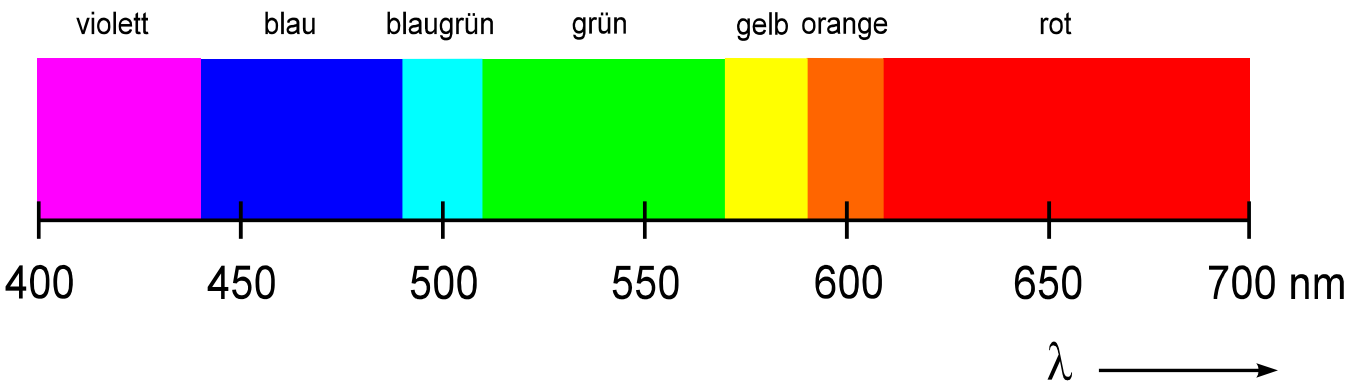
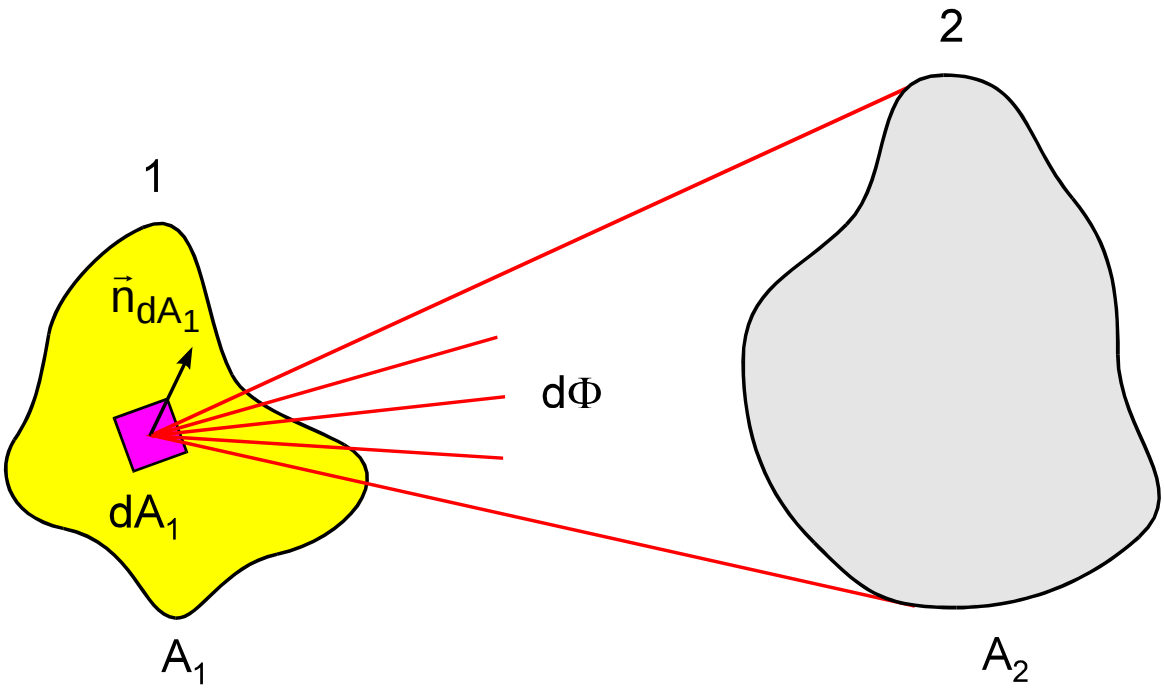
Elektromagnetisches Spektrum

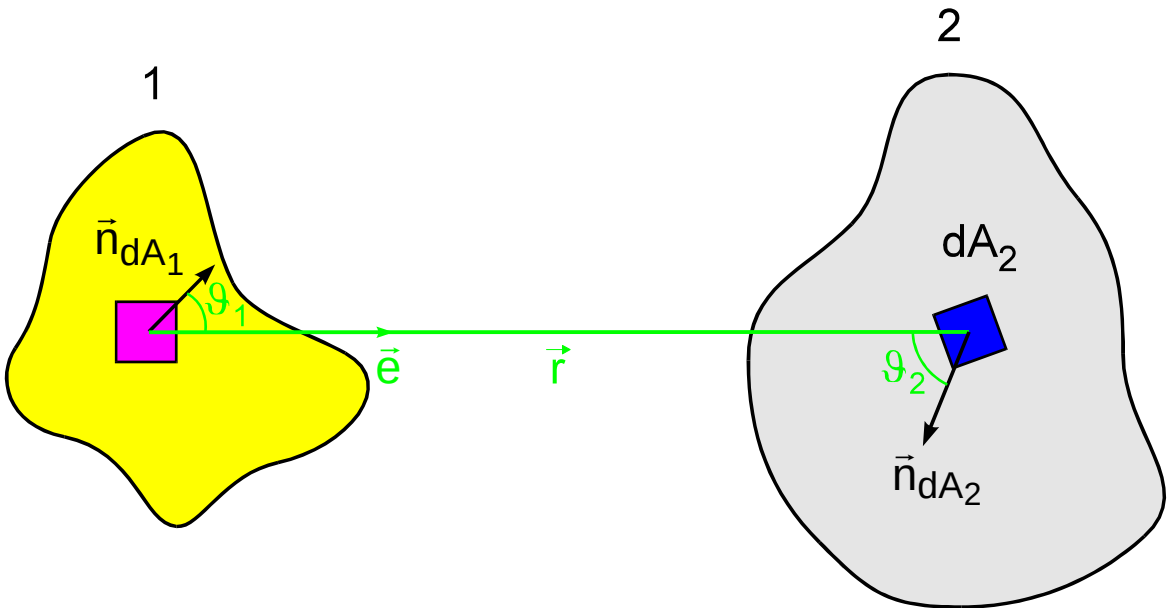


Spektralfarben

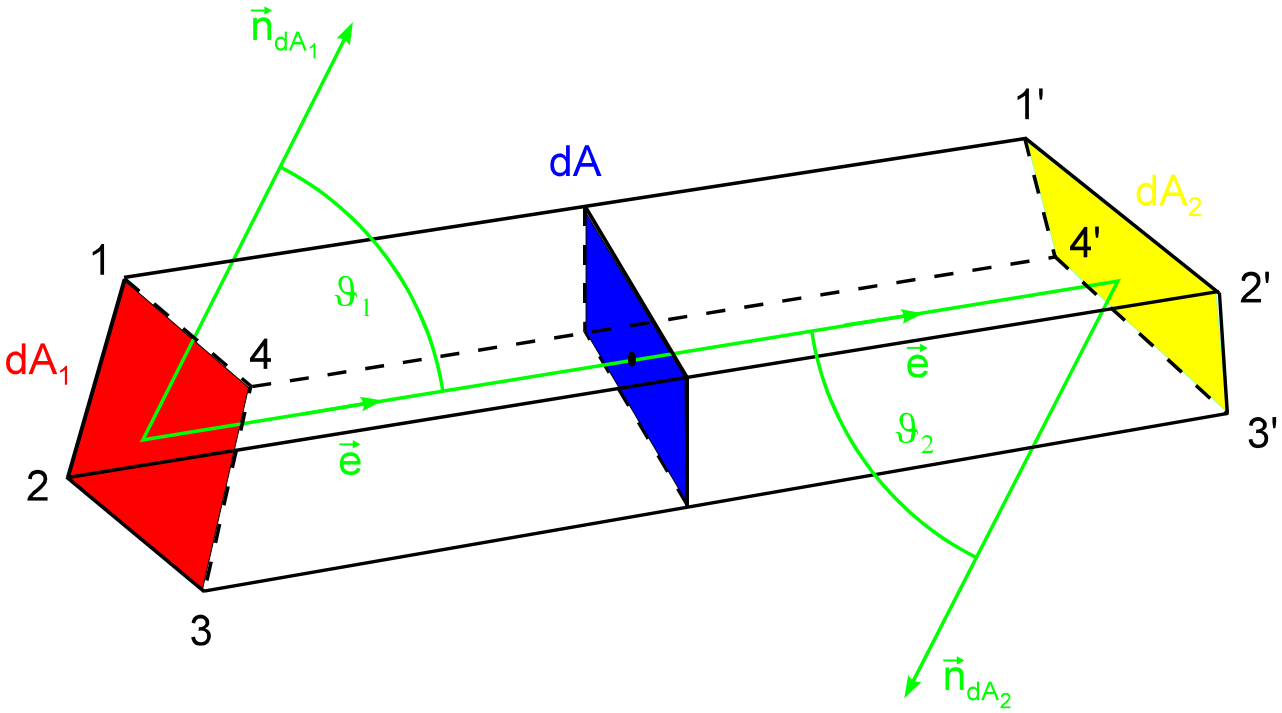


violette Spektralfarben :	400 . . . 440 nm
blaue Spektralfarben :	440 . . . 490 nm
blaugrüne Spektralfarben :	490 . . . 510 nm
grüne Spektralfarben :	510 . . . 570 nm
gelbe Spektralfarben :	570 . . . 590 nm
orangefarbene Spektralfarben :	590 . . . 610 nm
rote Spektralfarben :	610 . . . 700 nm


2
1
$\vec{n}_{dA_1}$
$d\Phi$
dA_1
A_1
A_2


2
1
$\vec{n}_{dA_1}$
dA_2
ϑ_1
$\vec{e}$
$\vec{r}$
ϑ_2
$\vec{n}_{dA_2}$

Elementarlichtröhre



$$dA = dA_1 \cdot \cos\vartheta_1 = dA_2 \cdot \cos\vartheta_2$$

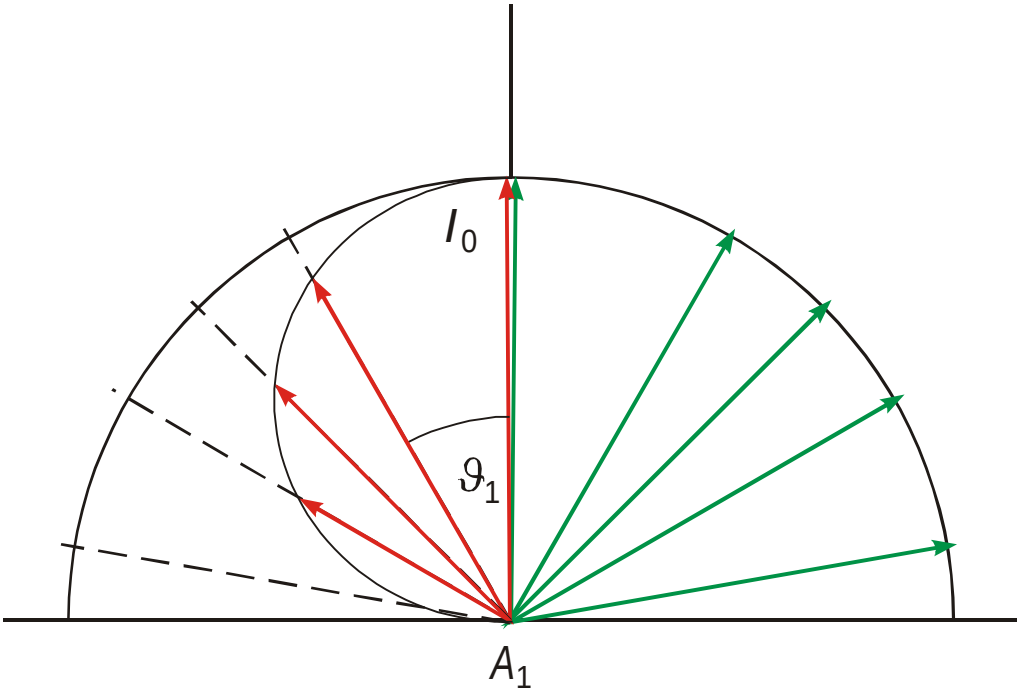
Lambertstrahler

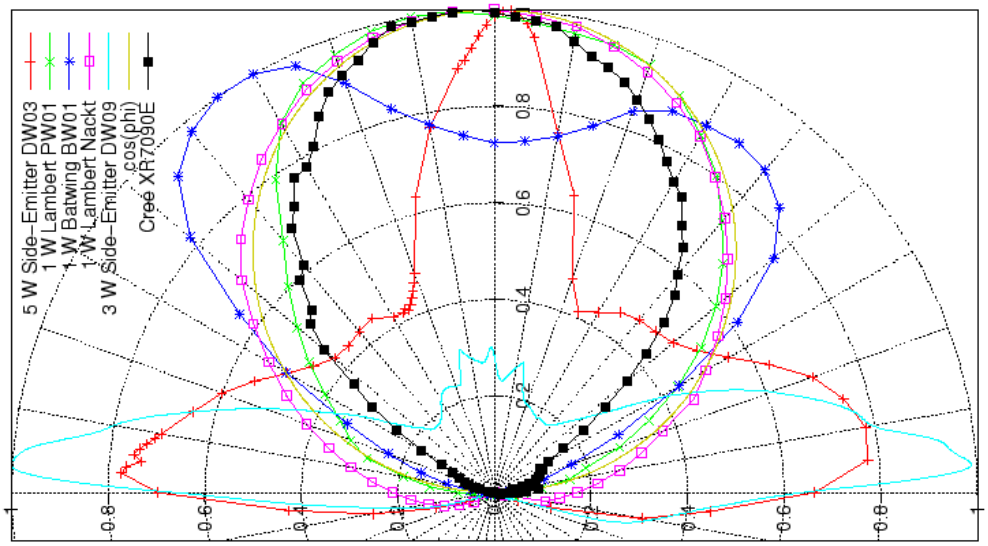
Strahlstärke

$$I = I_0 \cdot \cos \vartheta_1$$

Strahldichte

$$L = \frac{I}{A_1 \cdot \cos \vartheta_1}$$





Abstrahlverhalten von LED's, Quelle Olaf Schultze, Hamburg-Harburg
http://www.enhydralutris.de/Fahrrad/Beleuchtung/node140.html