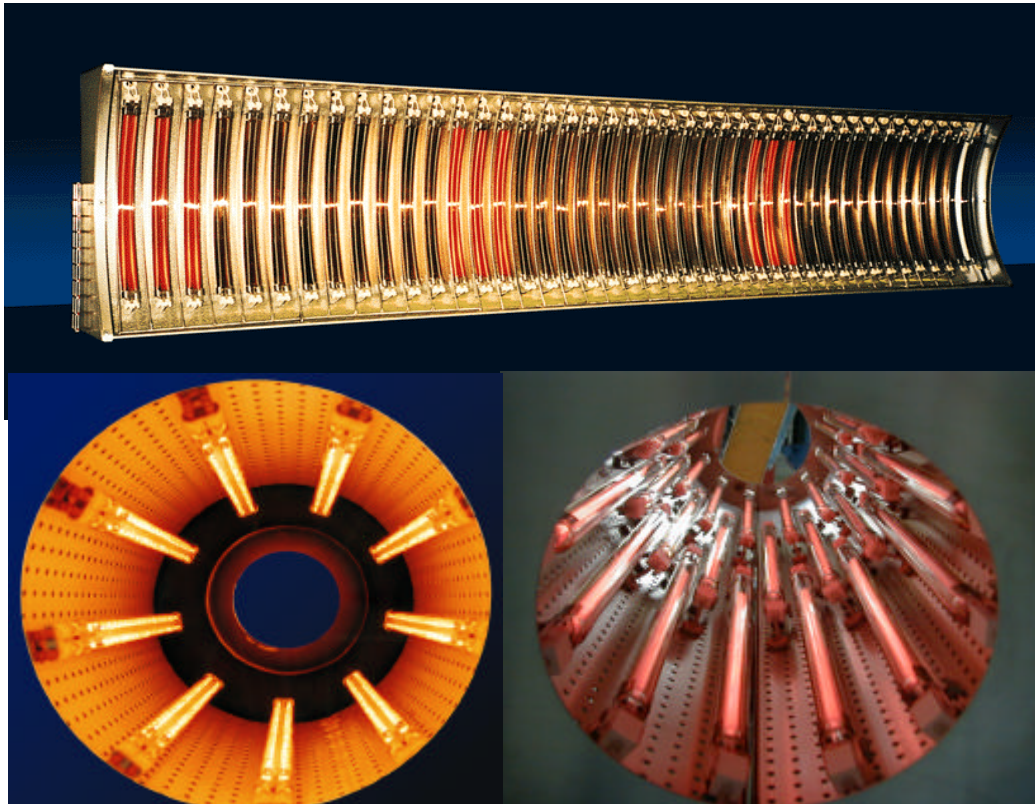
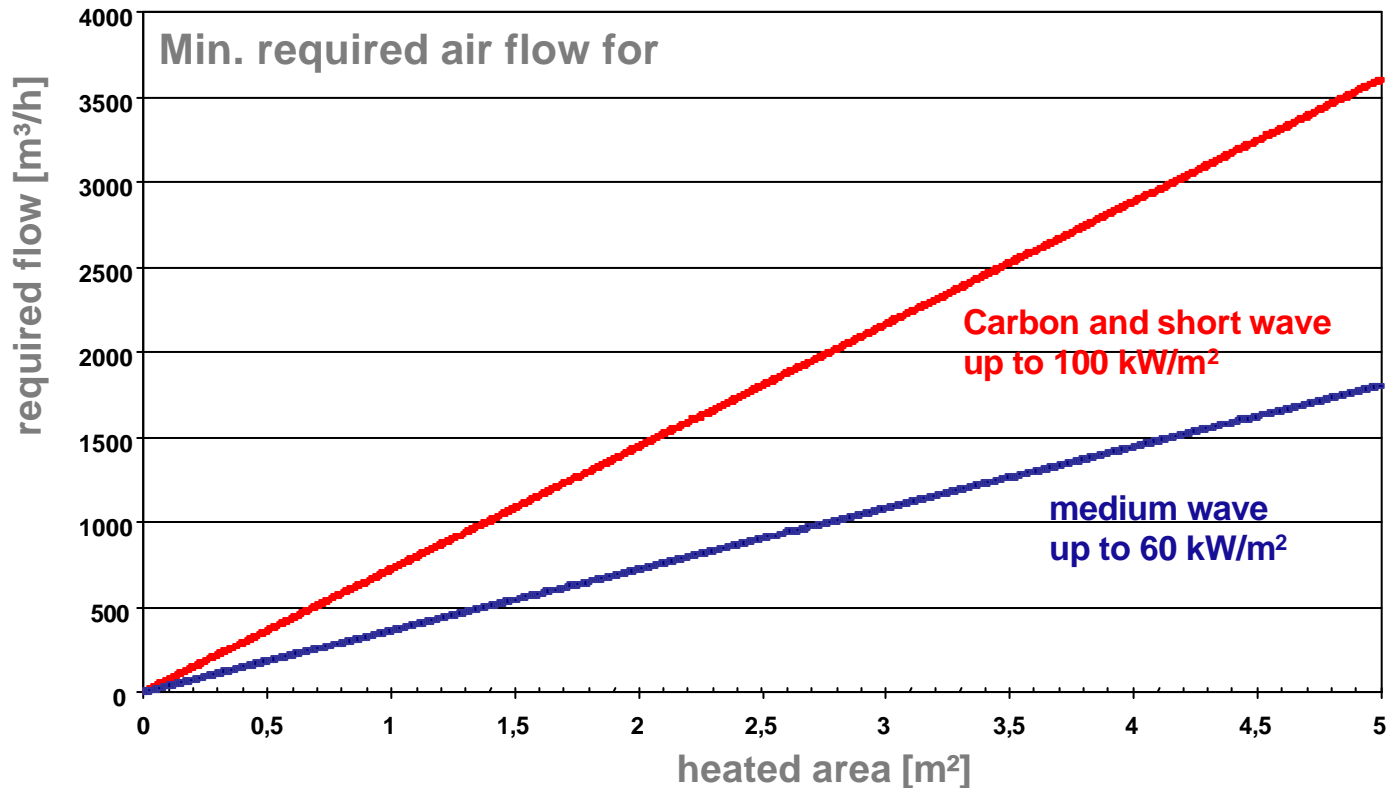


Infrared Technology - Tailor Made Modules



Required Airflow - Depending on Heated Area



For higher power densities required airflows on request !

Energy Effects at the Ends of Emitter

Why :

- energy flow to the unheated ends**
- cooling down by convection**
- cold area (open or cold wall)**
- absorption of energy by conveyor or heavy frames**

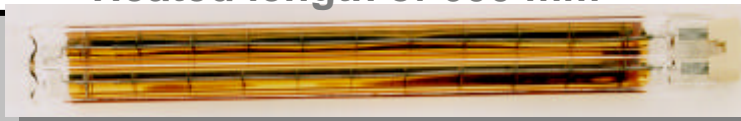
How you can solve this problem :

Distance between emitter and product

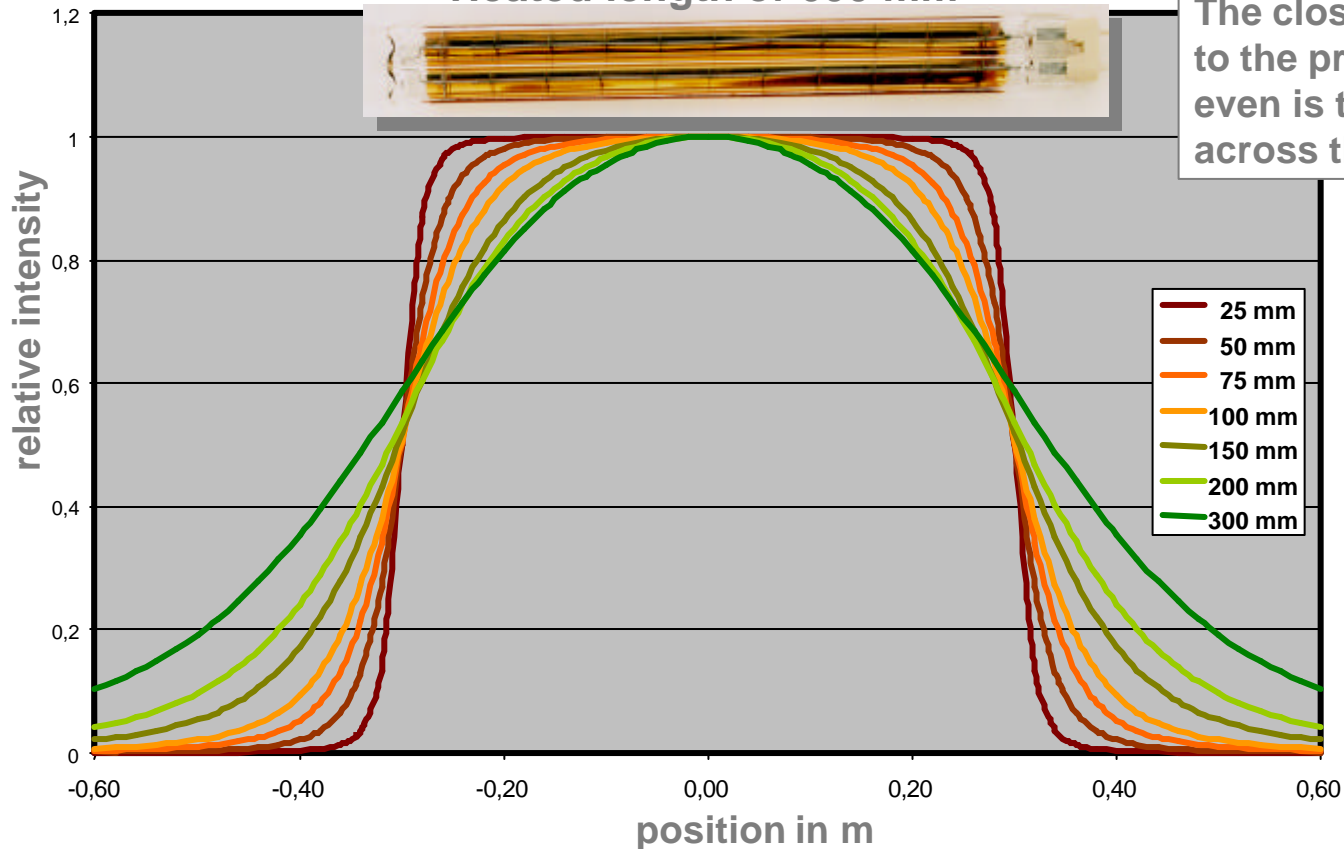
- up to 50mm by 2x 50 mm overheating edges**
- up to 150mm by 2x 100 mm overheating edges**
- more than 150mm by 2x 150 mm overheating edges**

Energy Losses at the Ends of Emitters

Heated length of 600 mm



The closer the emitter to the product the more even is the distribution across the product



Distance emitter-heated surface

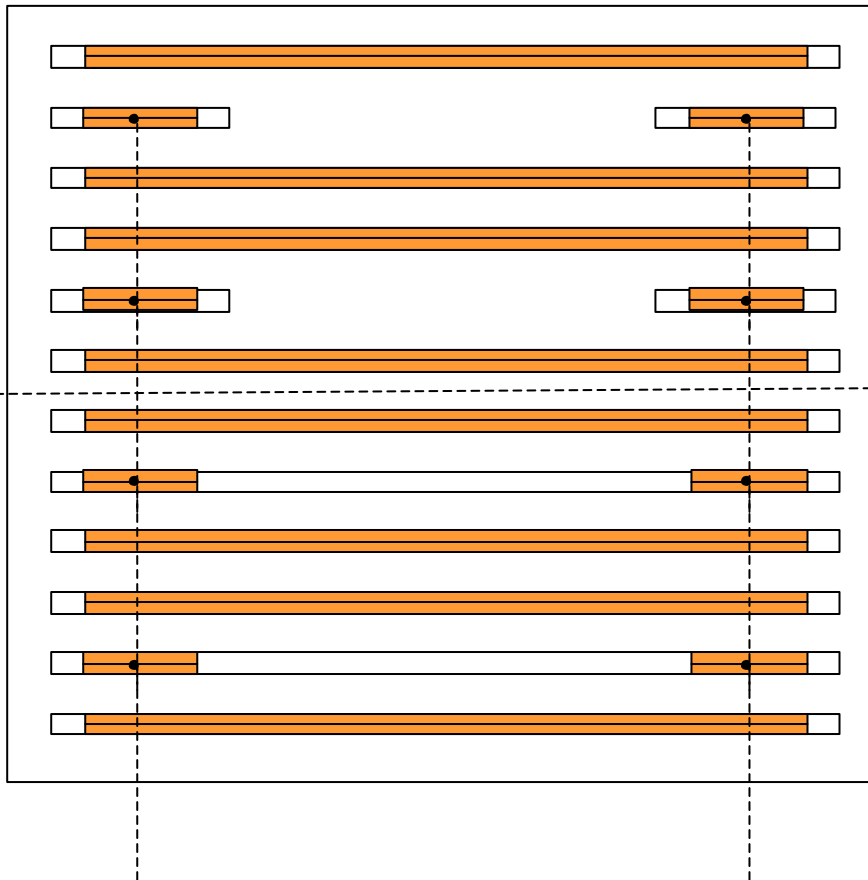
Energy Distribution of IR Modules

Similar to the effect of energy at the ends of the emitter, we have the same situation using IR-modules.

How to avoid the loss of energy at the peripheral zone ?

- to increase the heated length of the emitter
 - heated length up to 50mm → increase 50mm each side
 - heated length up to 150mm → increase 100mm each side
 - heated length more than 150mm → increase 150mm each side
- to cover the space between conveyor or product and IR-Module (2-sided or 4-sided) with metal sheets or wavelength converter
- additional emitters at the peripheral zones of the module (maximal power density is reduced)

Additional Heating of Peripheral Zones



Additional emitters at the peripheral zones of the module (maximum power density is reduced)

Edge Emitters

Long Emitters

Energy Distribution of IR Modules

How to avoid the loss of energy at the peripheral zone

- Use emitters in construction H
- Layout of the emitters in angle to the conveyor (5° to 15°)
- Regulate the energy of the additional emitters with a second power control unit (pyrometer optional)
- Cover the module with quartz glass or ceramic glass to reduce the influence of the forced air caused by the ventilation. Important for lightweight products, for example foils