

# Optimization of Heat Balance

## Stationary Analysis

Project:

**Izolacja pieco-kominka od gruntu**

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Geometry: Plane Wall

			<i>outdoor</i>	<i>indoor</i>	
Temperature .....	T =	<b>10</b>		<b>300</b>	°C
Rate of emission .....	$\epsilon$ =	0,50			
Radiation factor .....	$C_{12}$ =			0,90	
Convective heat transfer coefficient .....	$\alpha_k$ =			20,0	W / (m <sup>2</sup> K)
Total heat transfer coefficient .....	$\alpha$ =	8,2		57,6	W / (m <sup>2</sup> K)

S.	Name of product	Art.-Nr.	Width mm	Temperature in °C			Conductivity W / (m K)	Storage heat kJ / m <sup>2</sup>
				Ta	Tm	Ti		
1	<b>PROMALIGHT-1000</b>		10,0	68	184	292	0,021	481

Total Width .....	<b>10,0 mm</b>
Outside wall temperature .....	<b>68 °C</b>
Inside wall temperature .....	292 °C
Heat flux .....	473 W / m <sup>2</sup>
Total storage heat .....	481 kJ / m <sup>2</sup> = 0,134 kWh / m <sup>2</sup>

Remark: All values have normal tolerances.  
 Heat build-ups are not regarded.