

Symbol	Unit	Description	Collection	Source
T_{air}	°C	Air temperature	Measured	AWS1
K_{\downarrow}	W m ⁻²	Incoming shortwave radiation	Measured	AWS1
RH	%	Relative humidity	Measured	AWS1
L_{ws}	W m ⁻²	Incoming longwave radiation	Measured	AWS1
u	m s ⁻¹	Wind speed	Measured	AWS1
W	m	Stream width	Measured	24 transects
d_{ch}	m	Stream depth	Measured	24 transects
Q	m ³ s ⁻¹	Stream discharge	Measured	GS1 – GS4
T_i	°C	Temperatures at the upstream boundary	Measured	T2
T_{bed}	°C	Streambed temperature	Measured	P1
T_{L-w}	°C	Western tributary temperature	Measured	T12
y_p	mm/15 min	Precipitation	Measured	AWS1
Δt	min	Time step	Chosen	1 minute
Δd	m	Distance step	Chosen	1 meter
k_{sed}	-	Thermal properties of the sediment	Chosen	Gravel
SF	-	Shading factor	Estimated	0.5 – 0.9
VTS	-	View to sky coefficient	Estimated	0.4 – 0.6
T_{L-gw}	°C	Groundwater temperature	Estimated	5°C