

## Ambience module

## Single detector module

Input

Input

50 cols = 1 s

$b \times 500$

Convolution  
100@ $b \times 50$   
+ B. Norm.  
+ LReLU  
+ Dropout

Convolution  
10@ $b \times 50$   
+ B. Norm.  
+ LReLU  
+ Dropout

Convolution  
100@ $1 \times 1$   
+ B. Norm.  
+ LReLU  
+ Dropout

Convolution  
10@ $1 \times 1$   
+ B. Norm.  
+ LReLU  
+ Dropout

Convolution  
15@ $1 \times 1$   
+ Softmax

Convolution  
1@ $1 \times 1$   
+ Sigmoid

Global  
Average  
Pooling

Global  
Max  
Pooling  
+ Repeat

Out:  $100 \times 1 \times 451$

Out:  $10 \times 1 \times 451$

Out:  $100 \times 1 \times 451$

Out:  $10 \times 1 \times 451$

Out:  $15 \times 1 \times 451$

Out:  $1 \times 1 \times 451$

Out: 15

Out: 1 ( $\times 451$ )

Repeat & Concatenate