

$$p(r)\hat{i}(\omega)$$

The diagram illustrates a multi-layered model of a retinal circuit. At the top, a black line represents the 'Light input'  $p(r)\hat{i}(\omega)$ , which is a step function. Below this, five pink vertical ovals represent 'Receptor transduction (outer segments)' with gain  $\hat{g}(\omega)$ . Arrows from these ovals point to a purple horizontal bar representing 'Inner segments' with space constant  $\lambda_r$  and input  $\hat{U}(r, \omega)$ . From the bottom of the purple bar, two vertical lines with black dots at the top represent the 'Horizontal cell layer' with space constant  $\lambda_h$  and input  $\hat{V}(r, \omega)$ . The first line has a downward arrow labeled  $\hat{A}$ , and the second line has an upward arrow labeled  $\hat{k}(\omega)$ .

Light input

$$\hat{g}(\omega)$$

Receptor transduction  
(outer segments)

$$\hat{U}(r, \omega)$$

Space constant =  $\lambda_r$

Inner segments

$$\hat{A}$$

$$\hat{k}(\omega)$$

$$\hat{V}(r, \omega)$$

Space constant =  $\lambda_h$

Horizontal cell layer