$0 \leq f_j(\mathcal{Z}, \mathbf{k}) \leq 1$

OR $\quad v = 1 - \max\Big\{ f_1(\mathcal{Z}, \mathbf{k}), \boxed{f_2(\mathcal{Z}, \mathbf{k})}, \ldots, f_N(\mathcal{Z}, \mathbf{k}) \Big\}$

OR $\quad v = \max\Big\{ f_1(\mathcal{Z}, \mathbf{k}), f_2(\mathcal{Z}, \mathbf{k}), \ldots, f_N(\mathcal{Z}, \mathbf{k}) \Big\}$

AND $\quad v = \min\Big\{ u, d \Big\}$

$$u = \max_{f^+}\Big\{ f_1(\mathcal{Z}, \mathbf{k}), f_2(\mathcal{Z}, \mathbf{k}), \ldots, f_{\mathcal{U}}(\mathcal{Z}, \mathbf{k}) \Big\}$$

$$d = 1 - \max_{f^-}\Big\{ f_1(\mathcal{Z}, \mathbf{k}), f_2(\mathcal{Z}, \mathbf{k}), \ldots, f_{\mathcal{D}}(\mathcal{Z}, \mathbf{k}) \Big\}$$