

# 3VR VIDEO INTELLIGENCE PLATFORM™ STANDARD AND PREMIUM LICENSE PLATE RECOGNITION (LPR) REFERENCE SHEET



## LICENSE PLATE CAPTURE OPTIMIZATION

- Application** — LPR sites should be at choke points where traffic stops or moves less than 20 mph (e.g. toll booth, vehicle gate, stop sign). 3VR LPR supports US and most international plates.\*
- Cameras** — Analog or IP cameras. For IP cameras, video quality must be set to “highest” (if there is no video quality setting, set to lowest compression). Use wide dynamic range cameras for outdoor lighting situations.
- Lighting** — Uniform lighting is ideal. Outdoor lighting situations should employ wide dynamic range cameras. Backlighting (bright conditions behind the car) will negatively affect performance.
- Mounting** — Choose either vertical or horizontal mounting option:
  - Vertical — Camera should be directly above the lane of traffic. Use the Mounting chart below.
  - Horizontal — Camera should be mounted at the same height as the license plates. Use the Mounting chart below.
  - Diagonal (both at the side and above) mounting is not recommended.
- Field of View** — For accurate recognition of North-American plates, license plate characters should be 30 pixels high or greater, or use the Field of View chart below for reference.

Good lighting condition



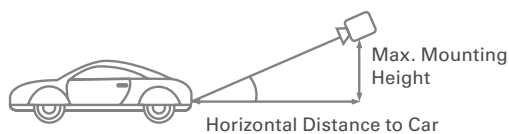
Bad lighting condition



\* Use 3VR Standard LPR for stopped U.S. plates and 3VR Premium LPR for moving or international plates

## MOUNTING

**Vertical** — Camera above lane of traffic



**Horizontal** — Camera mounted at the same height as license plate



### Vertical Mounting

Horizontal Distance to Car:	10'	12'	16'	20'	30'	40'	50'
Max. Mounting Height:	7	8'	10'	12'	17'	22'	27'

$(D / 2) + 2' = H$   
 D = Horiz. Distance to Car  
 H = Max. Mounting Height  
 Assuming a plate height of 2'

### Horizontal Mounting

Horizontal Distance to Car:	10'	12'	16'	20'
Max Mounting Side Deflection:	5'	6'	8'	10'

$(D / 2) = M$   
 D = Horizontal Distance to Car  
 M = Max. Mounting Side Deflection

## FIELD OF VIEW

Plate sizes are easiest to calibrate based on the determining “Car Widths” in the camera FOV. For example, for accurate recognition using an analog camera, the car width should fill the full FOV on an analog camera.



Car Width

Resolution	Megapixels	Approx. Max. Car Widths	OR	Max. Feet
Analog	0.3	1.0		5'
1024 x 768	0.7	1.4		7'
1280 x 1024	1.3	1.8		9'
1600 x 1200	2	2.2		11'
2048 x 1536	3	2.9		14.5'

## INSTANT LPR FEEDBACK:

For instant feedback on license plate capture, after inputting the live feed and installing the LPR plug-in on the appropriate camera, conduct a drive-through on that camera. Go to the Monitor panel and choose to view the “License Plate” event type.